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(FILE 'HOME' ENTERED AT 15:17:58 ON 15 JUN 2005)

L1 FILE 'HCAPLUS' ENTERED AT 15:19:27 ON 15 JUN 2005  
2 US20040192929/PN OR IT2003-MI61#/AP,PRN

FILE 'REGISTRY' ENTERED AT 15:20:24 ON 15 JUN 2005

L2 FILE 'HCAPLUS' ENTERED AT 15:20:26 ON 15 JUN 2005  
TRA L1 1- RN : 22 TERMS

L3 FILE 'REGISTRY' ENTERED AT 15:20:26 ON 15 JUN 2005  
22 SEA L2

L4 FILE 'WPIX' ENTERED AT 15:20:28 ON 15 JUN 2005  
2 US20040192929/PN OR IT2003-MI61#/AP,PRN

=> b hcap

FILE 'HCAPLUS' ENTERED AT 15:20:59 ON 15 JUN 2005  
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FILE COVERS 1907 - 15 Jun 2005. VOL 142 ISS 25  
FILE LAST UPDATED: 14 Jun 2005 (20050614/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

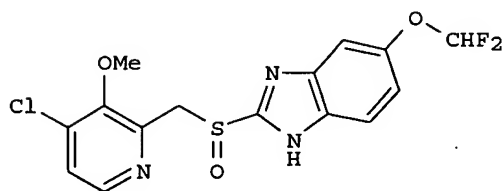
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L1 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2004:802613 HCAPLUS  
DN 141:314329  
ED Entered STN: 01 Oct 2004  
TI A process for preparation of organic compounds containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid  
IN Allegrini, Pietro; Napoletano, Caterina; Razzetti, Gabriele; Castaldi, Graziano  
PA Dinamite Dipharma S.p.A., Italy  
SO U.S. Pat. Appl. Publ., 5 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM C07C317-02  
INCL 548366100; 564162000; 568027000; 568028000  
CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 45  
FAN.CNT 1

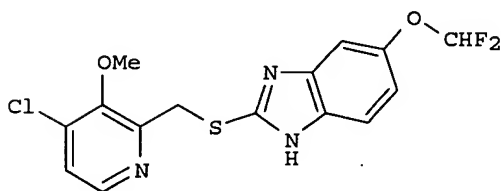
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004192929	A1	20040930	US 2004-801608	20040317 <--

Search done by Noble Jarrell

EP 1466897 A1 20041013 EP 2004-5420 20040308 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK  
 CA 2461833 AA 20040928 CA 2004-2461833 20040325 <--  
 PRAI IT 2003-MI617 A 20030328 <--  
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 INCL 548366100; 564162000; 568027000; 568028000  
 US 2004192929 NCL 548/366.100; 564/162.000; 568/027.000; 568/028.000  
 ECLA C07C315/02; C07D401/12+235C+211 <--  
 EP 1466897 ECLA C07C315/02; C07D401/12+235C+211 <--  
 OS CASREACT 141:314329  
 GI



I



II

AB The invention relates to a process of oxidation of thioethers to sulfoxides or sulfones. The oxidation of sulfoxides to sulfones by treatment of thioethers or sulfoxides with an oxidizing amount of phthalimidoperhexanoic acid is useful for the preparation of pharmaceuticals for human or veterinary use. For instance, benzimidazole derivative I was prepared via oxidation of II by phthalimidoperhexanoic acid with a yield of 88.8% (example 1). Phthalimidoperhexanoic acid is a stable, com. available, solid, and cheap oxidizing agent.

ST sulfinyl sulfonyl compd manuf prepn; thioether oxidn  
 phthalimidoperhexanoic acid

IT Oxidation  
 (catalytic; process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT Oxidation catalysts  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT Sulfonyl compounds  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT Thioethers  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT Functional groups

(sulfinyl group; process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT 68693-11-8P, Modafinil  
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT 38194-50-2P, Sulindac 118779-53-6P 409098-86-8P  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT 139-65-1 23593-22-8 36187-57-2, 1-(4-Fluorophenyl)-2-(4-methylthiophenyl)ethanone 49627-27-2 63547-22-8, 2-[(Diphenylmethyl)thio]acetic acid 68524-30-1 73590-85-9 102625-64-9 117977-21-6 368890-20-4 765929-44-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT 36187-64-1P 63547-24-0P, 2-[(Diphenylmethyl)sulfinyl]acetic acid  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

IT 128275-31-0, Phthalimidoperhexanoic acid  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

L1 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:794540 HCAPLUS

DN 141:282828

ED Entered STN: 29 Sep 2004

TI Process for the preparation of enteric-coated and/or controlled-release medicaments containing proton pump inhibitors

IN Predieri, Giulio

PA Acme Drugs S.r.l., Italy

SO Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM A61K009-16

ICS A61K009-50

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1462097	A1	20040929	EP 2004-7039	20040324 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
PRAI IT 2003-MI616	A	20030328 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1462097	ICM	A61K009-16
	ICS	A61K009-50
EP 1462097	ECLA	A61K009/50H6B; A61K009/50P; A61K031/4439 <--

AB A process for the preparation of enteric-coated and/or controlled-release compns. for oral use containing active principles sensitive to gastrointestinal environment and/or degradable in acidic media, in particular proton pump inhibitors, comprises (A) homogeneous mixing of the active principles with granulation excipients, followed by dry granulation and calibration; (B) spherionization of the granules; and (C) spray coating with a gastroprotective polymer. The compns. are useful for veterinary, dietetic or pharmaceutical active principles sensitive to the human and

animal gastrointestinal environment. For example, enteric-coated granules contained omeprazole 28.30 g, lactose D80 58.38 g, Aerosil 200 (anhydrous colloidal silica) 0.88 g, magnesium stearate 0.44 g, and Eudragit L30D55 enteric coating 12.00 g. The medicament ensures protection of the active ingredient from acidic media; more than 90% of the active ingredient remains unchanged after 60 min at pH 2. The medicament is effective, safe, and easy to use in the therapy of gastric ulcer in horses.

ST proton pump inhibitor oral enteric coated controlled release

IT Drug delivery systems  
(capsules, enteric-coated; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Granulation  
(dry granulation; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Coating materials  
(enteric polymers; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Drug delivery systems  
(enteric-coated; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Ulcer  
(gastric, treatment of; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Polymers, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(gastroprotective, coating; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Drug delivery systems  
(gels, oral; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Drug delivery systems  
(oral, controlled-release; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Drug delivery systems  
(pastes, oral; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Transport proteins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(proton pump, inhibitors; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Coating process  
(spray; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Drug delivery systems  
(syrups; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Drug delivery systems  
(tablets, enteric-coated; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Equus caballus  
(treatment of gastric ulcer in; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT Stomach, disease  
(ulcer, treatment of; preparation of enteric-coated and/or controlled-release oral compns. containing drugs sensitive to gastrointestinal environment)

IT 25212-88-8, Eudragit L30D55  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(enteric coating; preparation of enteric-coated and/or controlled-release

oral compns. containing drugs sensitive to gastrointestinal environment)  
IT 73590-58-6, Omeprazole 102625-70-7, Pantoprazole 103577-45-3,  
Lansoprazole  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(preparation of enteric-coated and/or controlled-release oral compns. containing  
drugs sensitive to gastrointestinal environment)

=> b reg

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STRUCTURE FILE UPDATES: 14 JUN 2005 HIGHEST RN 852282-01-0  
DICTIONARY FILE UPDATES: 14 JUN 2005 HIGHEST RN 852282-01-0

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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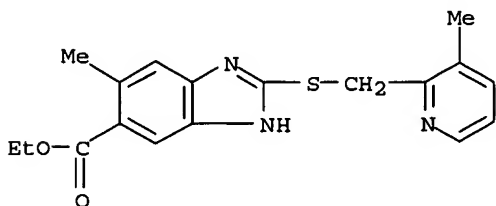
\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d ide l3 tot

L3 ANSWER 1 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 765929-44-0 REGISTRY  
ED Entered STN: 20 Oct 2004  
CN 1H-Benzimidazole-5-carboxylic acid, 6-methyl-2-[[[3-methyl-2-  
pyridinyl)methyl]thio]-, ethyl ester (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C18 H19 N3 O2 S  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

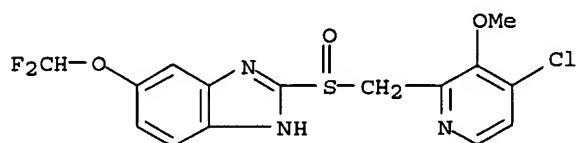


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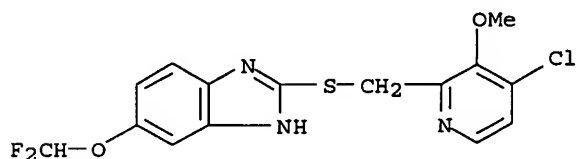
L3 ANSWER 2 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 409098-86-8 REGISTRY  
ED Entered STN: 30 Apr 2002  
CN 1H-Benzimidazole, 2-[[[4-chloro-3-methoxy-2-pyridinyl)methyl]sulfinyl]-5-(difluoromethoxy)- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 5-(Difluoromethoxy)-2-[[[3-methoxy-4-chloro-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole  
CN 5-(Difluoromethoxy)-2-[[[4-chloro-3-methoxy-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole  
FS 3D CONCORD  
MF C15 H12 Cl F2 N3 O3 S  
CI COM  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL



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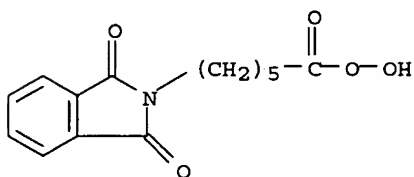
L3 ANSWER 3 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 368890-20-4 REGISTRY  
ED Entered STN: 12 Nov 2001  
CN 1H-Benzimidazole, 2-[[[4-chloro-3-methoxy-2-pyridinyl)methyl]thio]-5-(difluoromethoxy)- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2-[[[4-Chloro-3-methoxy-2-pyridyl)methyl]thio]-5-(difluoromethoxy)-1H-benzimidazole  
CN 5-(Difluoromethoxy)-2-[[[3-methoxy-4-chloro-2-pyridinyl)methyl]mercapto]-1H-benzimidazole  
CN 5-(Difluoromethoxy)-2-[[[4-chloro-3-methoxy-2-pyridinyl)methyl]thio]-1H-benzimidazole  
FS 3D CONCORD  
MF C15 H12 Cl F2 N3 O2 S  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, USPAT2, USPATFULL



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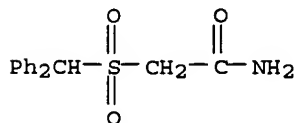
L3 ANSWER 4 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 128275-31-0 REGISTRY  
ED Entered STN: 20 Jul 1990  
CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 6-(Phthalimidoperoxy)hexanoic acid  
CN 6-(Phthalimidoperoxy)hexanoic acid  
CN 6-Phthalimidohexaneperoxoic acid  
CN Eureco  
CN Eureco HC  
CN Eureco HCL 11  
CN Eureco HCL 17  
CN Eureco W  
CN Phthalimidoperhexanoic acid  
FS 3D CONCORD  
DR 249937-65-3  
MF C14 H15 N O5  
CI COM  
SR CA  
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMLIST, TOXCENTER, USP2, USPATFULL



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2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
141 REFERENCES IN FILE CAPLUS (1907 TO DATE)

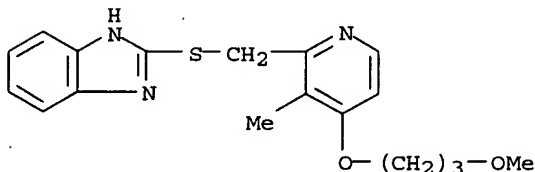
L3 ANSWER 5 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 118779-53-6 REGISTRY  
ED Entered STN: 03 Feb 1989  
CN Acetamide, 2-[(diphenylmethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2-(Benzhydrylsulfonyl)acetamide  
CN CRL 41056  
FS 3D CONCORD  
MF C15 H15 N O3 S  
SR CA  
LC STN Files: ANABSTR, CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL



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11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 6 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 117977-21-6 REGISTRY  
ED Entered STN: 16 Dec 1988  
CN 1H-Benzimidazole, 2-[[[4-(3-methoxypropoxy)-3-methyl-2-pyridinyl]methyl]thio]- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2-[[[3-Methyl-4-(3-methoxypropoxy)-2-pyridyl]methyl]thio]-1H-benzimidazole  
CN 2-[[[4-(3-Methoxypropoxy)-3-methyl-2-pyridinyl]methyl]thio]-1H-benzimidazole  
CN H 295/43  
FS 3D CONCORD  
MF C18 H21 N3 O2 S  
CI COM  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, PS, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL



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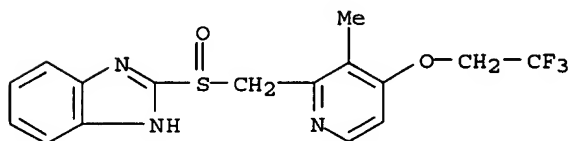
30 REFERENCES IN FILE CA (1907 TO DATE)  
30 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 7 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 103577-45-3 REGISTRY  
ED Entered STN: 02 Aug 1986  
CN 1H-Benzimidazole, 2-[[[3-methyl-4-(2,2,2-trifluoroethoxy)-2-pyridinyl]methyl]sulfinyl]- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN (±)-Lansoprazole  
CN 2-[[[3-Methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl]methyl]sulfinyl]-1H-benzimidazole  
CN A 65006  
CN AG 1749  
CN Agopton  
CN Ilsatec  
CN Ketian  
CN Lancid  
CN Lanfast  
CN Lanproton  
CN Lansopep  
CN Lansophed  
CN Lansoprazole  
CN Lansox  
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CN Lanzopral  
CN Lanzor  
CN Lapraz  
CN Ogast  
CN Ogastro

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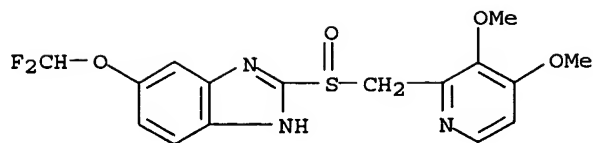
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CN Promp  
CN Prosogan  
CN Suprecid  
CN Takepron  
CN Ulpax  
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CI COM  
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LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*,  
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CHEMCATS, CIN, CSCHM, DDFU, DIOGENES, DRUGU, EMBASE, HSDB\*,  
IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK\*, MSDS-OHS,  
PATDPASPC, PHAR, PROMT, PROUSDDR, PS, RTECS\*, SYNTHLINE, TOXCENTER,  
USAN, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: WHO



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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1212 REFERENCES IN FILE CAPLUS (1907 TO DATE)

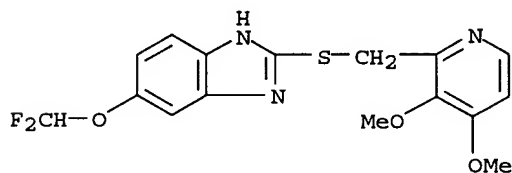
L3 ANSWER 8 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 102625-70-7 REGISTRY  
ED Entered STN: 14 Jun 1986  
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OTHER NAMES:  
CN 5-(Difluoromethoxy)-2-[[[(3,4-dimethoxy-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole  
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CN BY 1023  
CN Pantoprazole  
CN Pantozol  
CN SKF 96022  
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DR 154644-14-1  
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CI COM  
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CHEMCATS, CIN, CSCHM, DDFU, DIOGENES, DRUGU, EMBASE, HSDB\*,  
IMSCOSEARCH, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK\*,  
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TOXCENTER, USAN, USPAT2, USPATFULL  
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\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

604 REFERENCES IN FILE CA (1907 TO DATE)  
 20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 610 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 9 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 102625-64-9 REGISTRY  
 ED Entered STN: 14 Jun 1986  
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 CN H 258/28  
 FS 3D CONCORD  
 MF C16.H15 F2 N3 O3 S  
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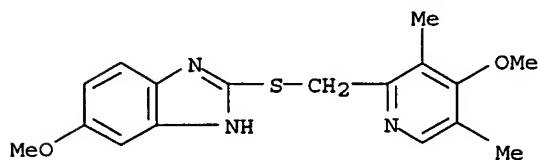


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

26 REFERENCES IN FILE CA (1907 TO DATE)  
 26 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 10 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 73590-85-9 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN 1H-Benzimidazole, 5-methoxy-2-[[4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 2-[[3,5-Dimethyl-4-methoxy-2-pyridyl)methyl]thio]-5-methoxy-1H-benzimidazole  
 CN 2-[[3,5-Dimethyl-4-methoxy-2-pyridyl)methyl]thio]-5-methoxybenzimidazole  
 CN 5-Methoxy-2-[[4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]-1H-benzimidazole  
 CN 5-Methoxy-2-[[4-methoxy-3,5-dimethyl-2-pyridyl)methyl]thio]-1H-benzimidazole  
 CN H 168/22

CN Omeprazole sulfide  
CN Pyrimetazole  
CN Ufiprazole  
FS 3D CONCORD  
MF C17 H19 N3 O2 S  
CI COM  
LC STN Files: ANABSTR, BEILSTEIN\*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS,  
CSCHEM, DDFU, DRUGU, IPA, MEDLINE, PHAR, PROUSDDR, PS, SYNTHLINE,  
TOXCENTER, USAN, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: WHO



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

86 REFERENCES IN FILE CA (1907 TO DATE)  
86 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 11 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 73590-58-6 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1H-Benzimidazole, 5-methoxy-2-[[[4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (±)-Omeprazole  
CN 2-[[[3,5-Dimethyl-4-methoxy-2-pyridyl)methyl]sulfinyl]-5-methoxy-1H-benzimidazole  
CN 5-Methoxy-2-[[[4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]-1H-benzimidazole  
CN Acidex  
CN Antra  
CN Antra MUPS  
CN Audazol  
CN Aulcer  
CN Belmazol  
CN Ceprandal  
CN Desec  
CN Dizprazol  
CN Dudencer  
CN Elgam  
CN Emeproton  
CN Epirazole  
CN Gastrimut  
CN Gastroloc  
CN Gastrozole  
CN Gibancer  
CN H 168/68  
CN Indurgan  
CN Inhibitron  
CN Inhipump  
CN Logastric  
CN Lomac  
CN Losec  
CN Mepral  
CN Miol

Search done by Noble Jarrell

CN Miracid  
 CN Mopral  
 CN Ocid  
 CN Omapren  
 CN Omebeta 20  
 CN Omed  
 CN Omedar  
 CN OMEP  
 CN Omepradex  
 CN Omepral  
 CN Omeprazen  
 CN Omeprazole  
 CN Omeprazon  
 CN Omepril  
 CN Omezol  
 CN Omezzol  
 CN Omid  
 CN Omisec  
 CN Omizac  
 CN OMP  
 CN Ompanyt

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
 DISPLAY

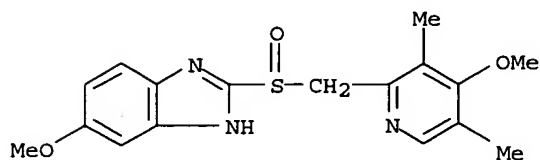
FS 3D CONCORD

DR 172964-80-6, 131959-78-9

MF C17 H19 N3 O3 S

CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*,  
 BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CIN, CSCHM, CSNB, DDFU, DIOGENES, DRUGU, EMBASE, HSDB\*,  
 IMSCSEARCH, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK\*,  
 PATDPASPC, PHAR, PIRA, PROMT, PROUSDDR, PS, RTECS\*, SYNTHLINE,  
 TOXCENTER, USAN, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: WHO



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

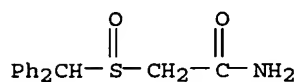
2951 REFERENCES IN FILE CA (1907 TO DATE)

56 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2964 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 12 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 68693-11-8 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Acetamide, 2-[(diphenylmethyl)sulfinyl]- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN (+)-Modafinil  
 CN 2-(Benzhydrylsulfinyl)acetamide  
 CN CEP 1538  
 CN CRC 40476  
 CN CRL 40476  
 CN DEP 1538  
 CN Modafinil  
 CN Modaphonil  
 CN Modiodal

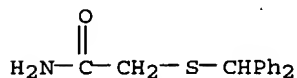
CN Provigil  
 FS 3D CONCORD  
 DR 112111-49-6  
 MF C15 H15 N O2 S  
 CI COM  
 LC STN Files: ADISINSIGHT, ADISNEWS, ANABSTR, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS,  
 CHEMLIST, CIN, DDFU, DIOGENES, DRUGU, EMBASE, IMSCOSEARCH, IMSDRUGNEWS,  
 IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK\*, NIOSHTIC, PATDPASPC, PHAR,  
 PROMT, PROUSDDR, PS, RTECS\*, SYNTHLINE, TOXCENTER, USAN, USPAT2,  
 USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: WHO



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

296 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 300 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 13 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 68524-30-1 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Acetamide, 2-[(diphenylmethyl)thio]- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 2-(Benzhydrylthio)acetamide  
 CN 2-[(Diphenylmethyl)thio]acetamide  
 FS 3D CONCORD  
 MF C15 H15 N O S  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER,  
 USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)

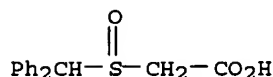


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

24 REFERENCES IN FILE CA (1907 TO DATE)  
 25 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 14 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 63547-24-0 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Acetic acid, [(diphenylmethyl)sulfinyl]- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN (±)-Modafinil acid  
 CN (Benzhydrylsulfinyl)acetic acid  
 CN 2-[(Diphenylmethyl)sulfinyl]acetic acid  
 CN CRL 40467  
 CN Modafinil acid  
 FS 3D CONCORD  
 MF C15 H14 O3 S

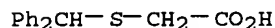
LC STN Files: ANABSTR, BIOSIS, CA, CAPLUS, CASREACT, IFICDB, IFIPAT,  
IFIUDB, MEDLINE, PS, TOXCENTER, USPAT2, USPATFULL



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

24 REFERENCES IN FILE CA (1907 TO DATE)  
25 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 15 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 63547-22-8 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Acetic acid, [(diphenylmethyl)thio]- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN (Benzhydrylthio)acetic acid  
CN 2-(Benzhydrylthio)acetic acid  
CN 2-[(Diphenylmethyl)thio]acetic acid  
FS 3D CONCORD  
MF C15 H14 O2 S  
CI COM  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, CHEMCATS, IFICDB, IFIPAT,  
IFIUDB, PS, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)

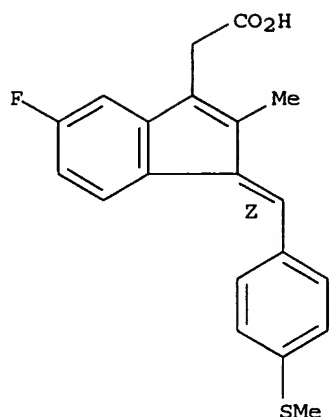


**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

29 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
29 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 16 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 49627-27-2 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylthio)phenyl]methylene]-, (1Z)- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylthio)phenyl]methylene]-, (Z)-  
OTHER NAMES:  
CN cis-Sulindac sulfide  
CN Sulindac sulfide  
CN Z-Sulindac sulfide  
FS STEREOSEARCH  
MF C20 H17 F O2 S  
LC STN Files: ADISNEWS, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,  
CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, DDFU, DRUGU, EMBASE, IFICDB,  
IFIPAT, IFIUDB, IPA, NIOSHTIC, PROMT, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*  
(\*Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



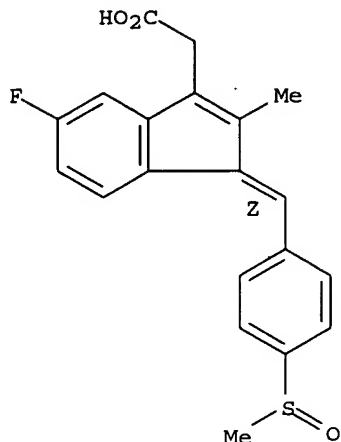
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

277 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 278 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 17 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 38194-50-2 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylsulfinyl)phenyl]methylene]-, (1Z)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylsulfinyl)phenyl]methylene]-, (Z)-  
 OTHER NAMES:  
 CN Aflodac  
 CN Algocetil  
 CN Arthrocine  
 CN Artribid  
 CN cis-5-Fluoro-2-methyl-1-[(p-methylsulfinyl)benzylidenyl]indene-3-acetic acid  
 CN cis-Sulindac  
 CN Citireuma  
 CN Clinoril  
 CN Clisundac  
 CN Imbaral  
 CN MK 231  
 CN Mobilin  
 CN Reumofil  
 CN Reumyl  
 CN Sudac  
 CN Sulindac  
 CN Sulindac sulfoxide  
 CN Sulinol  
 CN Sulreuma  
 FS STEREOSEARCH  
 DR 49627-22-7  
 MF C20 H17 F O3 S  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IMSPATENTS, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PHAR, PROMT, PROUSDDR, PS, RTECS\*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, WHO  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

Search done by Noble Jarrell

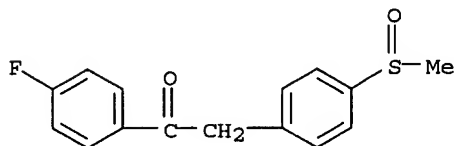
Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1342 REFERENCES IN FILE CA (1907 TO DATE)  
72 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1350 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 18 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 36187-64-1 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Ethanone, 1-(4-fluorophenyl)-2-[4-(methylsulfinyl)phenyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
DR 53933-83-8  
MF C15 H13 F O2 S  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

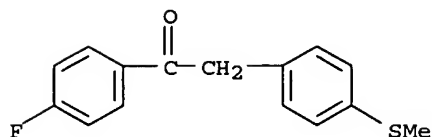
5 REFERENCES IN FILE CA (1907 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 19 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 36187-57-2 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Ethanone, 1-(4-fluorophenyl)-2-[4-(methylthio)phenyl]- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 1-(4-Fluorophenyl)-2-(4-methylsulfonylphenyl)ethanone  
CN 1-(4-Fluorophenyl)-2-(4-methylthiophenyl)ethanone  
FS 3D CONCORD  
MF C15 H13 F O S  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL

Search done by Noble Jarrell



(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

26 REFERENCES IN FILE CA (1907 TO DATE)  
26 REFERENCES IN FILE CAPLUS (1907 TO DATE)

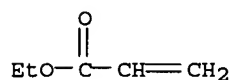
L3 ANSWER 20 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 25212-88-8 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2-Propenoic acid, ethyl ester, polymer with 2-methyl-2-propenoic acid (9CI)  
CN Acrylic acid ethyl ester, polymer with methacrylic acid (8CI)  
CN Methacrylic acid, polymer with ethyl acrylate (8CI)  
OTHER NAMES:  
CN Acrysol RM 4  
CN AK 214-82  
CN Alcogum  
CN Alcogum L 11  
CN Alcogum L 15  
CN Alcogum L 21  
CN ATX 01  
CN Carbopol EP 2  
CN Collicoat SR 30D  
CN DR 1071  
CN Ethyl acrylate-methacrylic acid copolymer  
CN Ethyl acrylate-methacrylic acid polymer  
CN Eudragit L 100-155  
CN Eudragit L 100-55  
CN Eudragit L 30D  
CN Eudragit L 30D55  
CN GBC 2600  
CN GBC 2620AC  
CN Kollicoat MAE  
CN Kollicoat MAE 100P  
CN Kollicoat MAE 30D  
CN Kollicoat MAE 30DP  
CN L 30D55  
CN Luvimer MAE  
CN MAE 30DP  
CN Methacrylic acid-ethyl acrylate copolymer  
CN Millitex PD 75  
CN Poly(ethyl acrylate-methacrylic acid)  
CN Primal RM 4  
CN RDJ 31-1  
CN Rhoplex 18  
CN Rhoplex RM 4  
CN RM 4  
CN RM 4 (polymer)  
CN Rohagit SD 15  
CN Sipacril 2739OF  
DR 163546-10-9, 95032-39-6, 83137-85-3, 87659-25-4, 52932-72-6, 100218-76-6, 286390-43-0

Search done by Noble Jarrell

MF (C5 H8 O2 . C4 H6 O2)x  
 CI PMS, COM  
 PCT Polyacrylic  
 LC STN Files: BIOBUSINESS, BIOSIS, CA, CAPLUS, CHEMCATS, CHEMLIST, CIN,  
 CSCHEM, DDFU, DRUGU, IFICDB, IFIPAT, IFIUDB, IPA, PIRA, PROMT, RTECS\*,  
 TOXCENTER, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

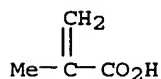
CM 1

CRN 140-88-5  
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CM 2

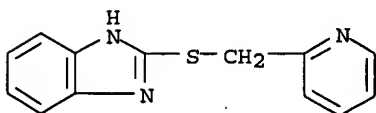
CRN 79-41-4  
 CMF C4 H6 O2



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1377 REFERENCES IN FILE CA (1907 TO DATE)  
 31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1380 REFERENCES IN FILE CAPLUS (1907 TO DATE)

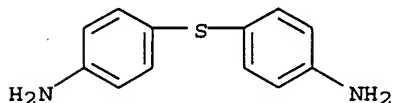
L3 ANSWER 21 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 23593-22-8 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN 1H-Benzimidazole, 2-[(2-pyridinylmethyl)thio]- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Benzimidazole, 2-[(2-pyridylmethyl)thio]- (8CI)  
 OTHER NAMES:  
 CN 2-(2-Pyridylmethylthio)benzimidazole  
 FS 3D CONCORD  
 DR 71858-05-4  
 MF C13 H11 N3 S  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, CHEMCATS, IFICDB, IFIPAT,  
 IFIUDB, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

25 REFERENCES IN FILE CA (1907 TO DATE)  
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
25 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 22 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 139-65-1 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Benzenamine, 4,4'-thiobis- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Aniline, 4,4'-thiodi- (6CI, 8CI)  
OTHER NAMES:  
CN 4,4'-Diaminodiphenyl sulfide  
CN 4,4'-Diaminophenyl sulfide  
CN 4,4'-Thiobis[aniline]  
CN 4,4'-Thiodianiline  
CN 4-(Aminophenylthio)phenylamine  
CN BAPS  
CN Bis(4-aminophenyl) sulfide  
CN Di(p-aminophenyl) sulfide  
CN NSC 6191  
CN p,p'-Diaminodiphenyl sulfide  
CN p,p'-Thiodianiline  
CN Thioaniline  
CN Thiodi-p-phenylenediamine  
FS 3D CONCORD  
MF C12 H12 N2 S  
CI COM  
LC STN Files: ANABSTR, BEILSTEIN\*, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS,  
CASREACT, CHEMCATS, CHEMLIST, CHEMSAFE, CSCHM, CSNB, GMLIN\*, HODOC\*,  
HSDB\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PROMT, PS,  
RTECS\*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

515 REFERENCES IN FILE CA (1907 TO DATE)  
32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
516 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
36 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> b wpix

FILE 'WPIX' ENTERED AT 15:21:15 ON 15 JUN 2005  
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE LAST UPDATED: 13 JUN 2005 <20050613/UP>  
MOST RECENT DERWENT UPDATE: 200537 <200537/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE

Search done by Noble Jarrell

<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES, PLEASE VISIT:

<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX FIRST VIEW - FILE WPIFV.

FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501. PLEASE CHECK:

<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-revision/> FOR DETAILS. <<<

=> d iall 14 tot

L4 ANSWER 1 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2004-698791 [68] WPIX

DOC. NO. CPI: C2004-247137

TITLE: Oxidizing thioethers to sulfoxides/sulfones (or sulfoxides to sulfones), used to prepare biologically active compound containing sulfinyl/sulfonyl group, comprises oxidizing thioethers/sulfoxides with epsilon-phthalimidoperhexanoic acid.

DERWENT CLASS: B05 C03

INVENTOR(S): ALLEGRI, P; CASTALDI, G; NAPOLETANO, C; RAZZETTI, G

PATENT ASSIGNEE(S): (ABBR-N) ABBREVIATED DIPHARMA SPA; (DINA-N) DINAMITE DIPHARMA SPA; (DIPH-N) DIPHARMA SPA

COUNTRY COUNT: 34

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
US 2004192929	A1	20040930	(200468) *		5	C07C317-02	--
EP 1466897	A1	20041013	(200468)	EN		C07C315-02	
CA 2461833	A1	20040928	(200470)	EN		C07C317-44	

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV

MC MK NL PL PT RO SE SI SK TR

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2004192929	A1	US 2004-801608	20040317
EP 1466897	A1	EP 2004-5420	20040308
CA 2461833	A1	CA 2004-2461833	20040325

PRIORITY APPLN. INFO: IT 2003-MI617  
20030328

INT. PATENT CLASSIF.:

MAIN: C07C315-02; C07C317-02; C07C317-44

SECONDARY: C07C317-14; C07D401-12

BASIC ABSTRACT:

US2004192929 A UPAB: 20041026

NOVELTY - Oxidation of thioethers to sulfoxides or sulfones; or oxidation of sulfoxides to sulfones comprises treatment of thioethers or sulfoxides with an oxidizing amount of epsilon-phthalimidoperhexanoic acid.

USE - The process is useful for the preparation of biologically active compounds containing a sulfinyl or sulfonyl group (particularly modafinil, modafinil-sulfone, sulindac, sulindac-sulfone, dapsone, omeprazole, pantoprazole, lansoprazole, timoprazole, picoprazole, rabeprazole or exomeprazole) (claimed). The sulfinyl- or sulfonyl-organic

compounds are useful as biologically active compounds or as intermediates in their preparation. The epsilon -phthalimidoperhexanoic acid is useful in the preparation of cosmetic formulations and detergents for domestic or industrial use. The process is useful in the preparation of compounds of industrial interest, in particular pharmaceuticals for human or veterinary use.

ADVANTAGE - The epsilon -phthalimidoperhexanoic acid can be easily and safely handled and used on an industrial scale without the need of particular plants or specific safety procedures. The epsilon -phthalimidoperhexanoic acid is also a stable, commercially available, solid and cheap product; and particularly epsilon -phthalimidoperhexanoic acid and its reduced by-product ( epsilon -phthalimidohexanoic acid) are substantially low polluting and can be advantageously used on a large scale.

Dwg.0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB; DCN  
MANUAL CODES: CPI: B06-D05; B10-A10; C06-D05; C10-A10

L4 ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2004-692590 [68] WPIX

DOC. NO. CPI: C2004-245411

TITLE: Preparation of products for oral use containing active principles sensitive to gastrointestinal environment, by homogeneous mixing of active principles with granulation excipients, and spray coating with gastroprotective polymer.

DERWENT CLASS: A96 B02 B07 C07 D13

INVENTOR(S): PREDIERI, G

PATENT ASSIGNEE(S): (ACME-N) ACME DRUGS SRL

COUNTRY COUNT: 32

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 1462097	A1	20040929	(200468)*	EN	8	A61K009-16	
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV							
MC MK NL PL PT RO SE SI SK TR							

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1462097	A1	EP 2004-7039	20040324

PRIORITY APPLN. INFO: IT 2003-MI616  
20030328

#### INT. PATENT CLASSIF.:

MAIN: A61K009-16  
SECONDARY: A61K009-50

#### BASIC ABSTRACT:

EP 1462097 A UPAB: 20041026

NOVELTY - Products for the oral use containing active principles sensitive to gastrointestinal environment, are prepared by homogeneous mixing of the active principles with granulation excipients, followed by dry granulation and calibration; spherization of the granules; and spray coating with a gastroprotective polymer.

ACTIVITY - Antiulcer; Gastrointestinal-Gen.

MECHANISM OF ACTION - None given.

USE - The invention is for preparation of products, preferably enteric coated granulates, for oral use containing active principles sensitive to gastrointestinal environment. The enteric coated granulates are useful for pharmaceutical or veterinary compositions, feed premixtures (claimed), dietetics, functional foodstuffs, nutraceuticals, probiotics, and excipients for zootechnical feeding, for treatment of gastric ulcer in

men and animals.

ADVANTAGE - The invention is simpler and cheaper than the prior art. It allows to obtain enteric-coated granules, without the preparation of neutral pellets and coating-pan enrichment. It shortens the permanence time of the granulate in the coating-pan; reduces error probability in dosing the active principle and degradation of the active ingredient; can be carried out on powdery raw material, which renders unnecessary hot air drying of semifactured products; and reduces the risk of oxidation of the active principle.

Dwg.0/0

FILE SEGMENT:	CPI
FIELD AVAILABILITY:	AB; DCN
MANUAL CODES:	CPI: A12-V01; B04-C02A1; B04-C02B2; B04-C03B; B04-C03C; B05-B02A3; B05-B02C; B06-D05; B07-A02B; B10-C04E; B12-M10B; B12-M11D; B14-E08; C04-C02A1; C04-C02B2; C04-C03B; C04-C03C; C05-B02A3; C05-B02C; C06-D05; C07-A02B; C10-C04E; C12-M10B; C12-M11D; C14-E08; D03-G

=> b home

FILE 'HOME' ENTERED AT 15:21:19 ON 15 JUN 2005

=> b reg

FILE 'REGISTRY' ENTERED AT 15:38:54 ON 15 JUN 2005

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STRUCTURE FILE UPDATES: 14 JUN 2005 HIGHEST RN 852282-01-0

DICTIONARY FILE UPDATES: 14 JUN 2005 HIGHEST RN 852282-01-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d ide l9 tot

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 128275-31-0 REGISTRY

ED Entered STN: 20 Jul 1990

CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN e-(Phthalimidoperoxy)hexanoic acid

CN 6-(Phthalimidoperoxy)hexanoic acid

CN 6-Phthalimidohexaneperoxoic acid

CN Eureco

CN Eureco HC

CN Eureco HCL 11

CN Eureco HCL 17

CN Eureco W

CN Phthalimidoperhexanoic acid

FS 3D CONCORD

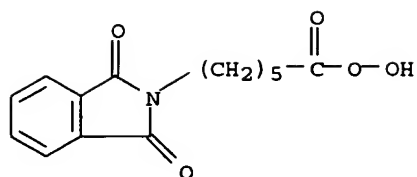
DR 249937-65-3

MF C14 H15 N O5

CI COM

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMLIST, TOXCENTER, USPAT2, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

141 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 141 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his full

(FILE 'HOME' ENTERED AT 15:17:58 ON 15 JUN 2005)

FILE 'HCAPLUS' ENTERED AT 15:19:27 ON 15 JUN 2005

L1 2 SEA ABB=ON PLU=ON US20040192929/PN OR IT2003-MI61#/AP,PRN

FILE 'REGISTRY' ENTERED AT 15:20:24 ON 15 JUN 2005

FILE 'HCAPLUS' ENTERED AT 15:20:26 ON 15 JUN 2005

L2 TRA L1 1- RN : 22 TERMS

FILE 'REGISTRY' ENTERED AT 15:20:26 ON 15 JUN 2005

L3 22 SEA ABB=ON PLU=ON L2

FILE 'WPIX' ENTERED AT 15:20:28 ON 15 JUN 2005

L4 2 SEA ABB=ON PLU=ON US20040192929/PN OR IT2003-MI61#/AP,PRN

FILE 'REGISTRY' ENTERED AT 15:30:37 ON 15 JUN 2005

L5 199 SEA ABB=ON PLU=ON C14H15NO5 AND NC4-C6/ES

L6 QUE ABB=ON PLU=ON (PMS OR MAN OR IDS)/CI OR UNSPECIFIED OR  
 COMPD OR COMPOUND OR (D OR T)/ELS

L7 188 SEA ABB=ON PLU=ON L5 NOT L6

L8 170 SEA ABB=ON PLU=ON L7 AND NR=2

SEL RN 69 L8

L9 1 SEA ABB=ON PLU=ON 128275-31-0/BI AND L8

L10 18 SEA ABB=ON PLU=ON L7 NOT L8

FILE 'HCAPLUS' ENTERED AT 15:43:46 ON 15 JUN 2005

L11 141 SEA ABB=ON PLU=ON L9 OR ((6 OR E) (1A) (PHthalimidope  
 ROXY OR PHthal? (1A) (IMIDOPEROX? OR IMID? (1A) PEROX?) (1A)  
 HEXANOIC) OR PHthalIMIDOPERHEXANOIC OR PHthal? (1A) (PERHEXAN?  
 OR PER? (1A) HEXAN?) OR PHthalIMID? (1A) PERHEXAN?) (1A) ACID#  
 E THIOETHERS/CT

E E3+ALL

L12 QUE ABB=ON PLU=ON THIOETHERS+OLD,NT/CT

E ETHERS/CT

E E3+OLD,NT1

L13 QUE ABB=ON PLU=ON (ETHERS+OLD,NT1/CT OR ETHER#/CW) (L) THIO

E SULFOXIDES/CT

E E3+ALL

L14 QUE ABB=ON PLU=ON SULFOXIDES+NT/CT

E SULFONYL COMPOUNDS/CT

E E3+ALL

L15 QUE ABB=ON PLU=ON SULFONYL COMPOUNDS+NT/CT

L16 18564 SEA ABB=ON PLU=ON (L14 OR L15) (L) PREP+NT/RL

L17 3 SEA ABB=ON PLU=ON L11 AND L16

L18 8207 SEA ABB=ON PLU=ON L12 (L) RACT+NT/RL

Search done by Noble Jarrell



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L19      2 SEA ABB=ON  PLU=ON  L11 AND L18
L20      2 SEA ABB=ON  PLU=ON  L18 AND L19
          E SULFONES/CT
          E E3+ALL
L21      QUE ABB=ON  PLU=ON  SULFONES+NT/CT
L22      0 SEA ABB=ON  PLU=ON  L14 AND L21 AND L11
L23      5 SEA ABB=ON  PLU=ON  L11 AND L12
L24      3 SEA ABB=ON  PLU=ON  L23 AND (L14 OR L15)
          SAV TEM L11 NWAC2/Q
          SAV TEM L11 NWAC2608/Q
L25      6 SEA ABB=ON  PLU=ON  L19 OR L20 OR L17 OR L23 OR L24

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=> b hcap

FILE 'HCAPLUS' ENTERED AT 15:57:38 ON 15 JUN 2005  
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FILE COVERS 1907 - 15 Jun 2005 VOL 142 ISS 25  
 FILE LAST UPDATED: 14 Jun 2005 (20050614/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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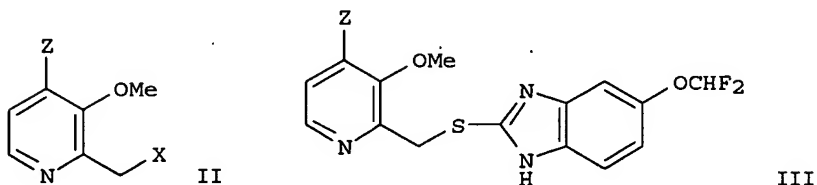
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L25 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:275305 HCAPLUS
DN 142:336359
ED Entered STN: 31 Mar 2005
TI process for preparation of pantoprazole via reaction of a
mercaptoimidazole with a picoline followed by oxidation and methoxylation
IN Napoletano, Caterina; Porta, Eleonora; Allegrini, Pietro; Castaldi,
Graziano
PA Dipharma S.P.A., Italy
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D401-12
CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1
PATENT NO.      KIND      DATE      APPLICATION NO.      DATE
-----
PI EP 1518857    A1      20050330    EP 2004-21784        20040914
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
JP 2005097302    A2      20050414    JP 2004-266846        20040914
US 2005096352    A1      20050505    US 2004-946112        20040922
PRAI IT 2003-MI1813    A      20030923
CLASS
PATENT NO.      CLASS      PATENT FAMILY CLASSIFICATION CODES
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Search done by Noble Jarrell

EP 1518857 ICM C07D401-12  
 EP 1518857 ECLA C07D401/12+235C+213  
 JP 2005097302 FTERM 4C063/AA01; 4C063/BB08; 4C063/CC26; 4C063/DD12;  
 4C063/EE01  
 US 2005096352 NCL 514/338.000; 546/273.700  
 ECLA C07D401/12+235C+213  
 OS CASREACT 142:336359; MARPAT 142:336359  
 GI



- AB A process for the preparation of pantoprazole comprises reaction of 5-difluoromethoxy-2-mercaptobenzimidazole (I) with picoline derivs. (II; X, Z = leaving groups) to give pyridinylmethylthiobenzimidazole intermediates (III; Z = leaving group), oxidation thereof with  $\alpha$ -phthalimidoperhexanoic acid, and subsequent methoxylation. Thus, 2-hydroxymethyl-3-methoxy-4-chloropyridine hydrochloride in PhMe was treated dropwise with SOCl<sub>2</sub> at 15-25° and kept for ≥1 h. The resulting residue was stirred with NaOMe and I at 15-25° to give 82.8% 5-difluoromethoxy-2-[(4-chloro-3-methoxy-2-pyridinyl)methyl]thio-1H-benzimidazole. The latter in Me<sub>2</sub>CHOH was treated with  $\alpha$ -phthalimidoperhexanoic acid in Me<sub>2</sub>CHOH followed by stirring for 5 h to give 84.4% 5-difluoromethoxy-2-[(4-chloro-3-methoxy-2-pyridinyl)methyl]sulfinyl-1H-benzimidazole. This was refluxed with NaOMe in MeOH to give 70.8% pantoprazole sodium salt sesquihydrate.
- ST mercaptoimidazole picoline deriv coupling reaction; pyridinylmethylthiobenzimidazole oxidn phthalimidoperhexanoic acid; pantoprazole prepn
- IT Oxidation  
 (process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)
- IT Aromatic hydrocarbons, uses  
 Hydrocarbons, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)
- IT Etherification  
 (thioetherification; process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)
- IT 409098-85-7P, 2-Chloromethyl-3-methoxy-4-chloropyridine  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of)
- IT 368890-20-4P, 5-(Difluoromethoxy)-2-[(4-chloro-3-methoxy-2-pyridinyl)methyl]thio]-1H-benzimidazole 409098-86-8P, 5-(Difluoromethoxy)-2-[(4-chloro-3-methoxy-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole  
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)
- IT 102625-70-7P, Pantoprazole 848676-43-7P, 5-(Difluoromethoxy)-2-[(4-chloro-3-methoxy-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole sodium salt  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)

IT 67-56-1, Methanol, uses 108-88-3, Toluene, uses  
 RL: NUU (Other use, unclassified); USES (Uses)

(process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)

IT 97963-62-7, 5-Difluoromethoxy-2-mercaptobenzimidazole 848676-41-5,  
 2-Hydroxymethyl-3-methoxy-4-chloropyridine hydrochloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)

IT 128275-31-0  
 RL: RGT (Reagent); RACT (Reactant or reagent)

(process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Alberto, P; WO 0228852 A 2002 HCAPLUS

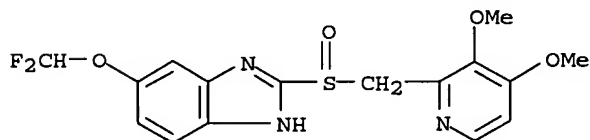
(2) Dipharma S P A; EP 1466897 A 2004 HCAPLUS

IT 102625-70-7P, Pantoprazole  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)

RN 102625-70-7 HCAPLUS

CN 1H-Benzimidazole, 5-(difluoromethoxy)-2-[[3,4-dimethoxy-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

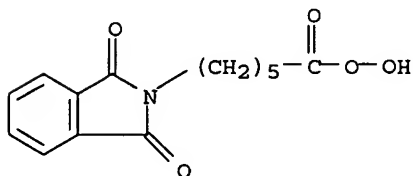


IT 128275-31-0  
 RL: RGT (Reagent); RACT (Reactant or reagent)

(process for preparation of pantoprazole via reaction of a mercaptoimidazole with a picoline followed by oxidation and methoxylation)

RN 128275-31-0 HCAPLUS

CN 2H-Isindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)



L25 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:1059331 HCAPLUS

DN 142:22889

ED Entered STN: 10 Dec 2004

TI Method of producing an organic compound comprising at least one oxygenated functional group by oxidation with ε -(

phthalimidoperoxy)hexanoic acid

IN Buyle, Olivier; Mathieu, Veronique; Lorent, Karol

PA Solvay et Cie., Belg.

SO PCT Int. Appl., 18 pp.

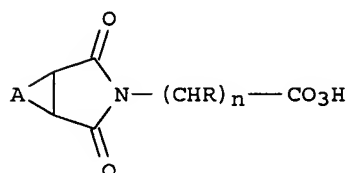
CODEN: PIXXD2  
 DT Patent  
 LA French  
 IC ICM C07D301-14  
 ICS C07D303-04; C07D303-14; C07D303-08; C07D313-04; C07C317-04  
 CC 21-2 (General Organic Chemistry)  
 Section cross-reference(s): 45

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004106313	A1	20041209	WO 2004-EP50990	20040602
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FR 2855824	A1	20041210	FR 2003-6718	20030603
PRAI FR 2003-6718	A	20030603		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004106313	ICM	C07D301-14
	ICS	C07D303-04; C07D303-14; C07D303-08; C07D313-04; C07C317-04
WO 2004106313	ECLA	C07C315/02; C07D301/14
FR 2855824	ECLA	C07C315/02; C07D301/14
OS	MARPAT 142:22889	
GI		



AB The invention is directed to a method of producing an organic compound comprising at least one oxygenated functional group, by oxidation of an organic precursor comprising an oxidizable functionality with an imidoarom. percarboxylic acid I [wherein A = (un)substituted benzene, naphthalene; R = independently H, CO<sub>2</sub>H, CO<sub>3</sub>H, (un)substituted alkyl, n = 1-5]. Specifically, the invention is related to a method of oxidation of nitrogen, sulfur and phosphorous-containing compds., and epoxidn. of acyclic and cyclic olefins and ketones using ε-(phthalimidoperoxy)hexanoic acid (II). The advantages include higher selectivity and oxidation yield, and absence of side reactions. Thus, reacting allyl chloride with II at 60° for 17 h gave epichlorohydrin in 91% yield.

ST oxidn phthalimidoperoxyhexanoic acid oxidant epoxide sulfone prepn; imidoarom percarboxylic acid oxidant

IT Alkenes, reactions  
 Ketones, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclic and acyclic, starting materials; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an

- imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT Epoxides  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (epoxidn. products; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT Sulfones  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (oxidation products; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT Carboxylic acids, reactions  
 RL: RCT (Reactant); RGT (Reagent); RACT (Reactant or reagent)  
 (peroxy, imidoarom., oxidation reagents; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT Epoxidation  
 Oxidation  
 Oxidizing agents  
 (preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT Organic compounds, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (sulfur-containing, oxidizable; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT 108-94-1, Cyclohexanone, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (ketone starting material; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT 107-05-1, Allyl chloride 110-83-8, Cyclohexene, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (olefin starting material; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT 128275-31-0,  $\epsilon$ -Phthalimidoperoxyhexanoic acid  
 RL: RCT (Reactant); RGT (Reagent); RACT (Reactant or reagent)  
 (oxidation agent; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT 106-89-8P, Epichlorohydrin, preparation 286-20-4P, Cyclohexene oxide 502-44-3P,  $\epsilon$ -Caprolactone 598-04-9P, Dibutyl sulfone  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (oxidation product; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)hexanoic acid)
- IT 7723-14-0D, Phosphorus, oxidizable organic derivative 7727-37-9D, Nitrogen, oxidizable organic derivative 7782-49-2D, Selenium, oxidizable organic derivative  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (starting materials; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  - (phthalimidoperoxy)

)hexanoic acid)

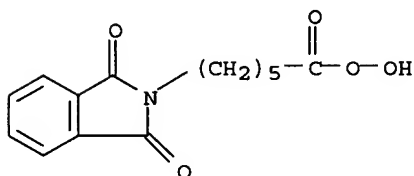
IT 544-40-1, Dibutyl sulfide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (sulfide starting material; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  -(phthalimidoperoxy)hexanoic acid)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE  
 (1) Ausimont Srl; EP 0325288 A 1989 HCAPLUS  
 (2) Carlos, D; WO 9827943 A 1998 HCAPLUS  
 (3) Carlucci, G; WO 0051651 A 2000 HCAPLUS  
 (4) Carlucci, G; WO 0065083 A 2000 HCAPLUS  
 (5) Contract Chemicals Limited; GB 2330358 A 1999 HCAPLUS  
 (6) Henkel Kgaa; DE 3906768 A 1990 HCAPLUS  
 (7) Lion, C; COMPTES RENDUS DE L'ACADEMIE DES SCIENCES, SERIE IIC: CHIMIE 1999, V2(1), P57 HCAPLUS

IT 128275-31-0,  $\epsilon$ -Phthalimidoperoxyhexanoic acid  
 RL: RCT (Reactant); RGT (Reagent); RACT (Reactant or reagent)  
 (oxidation agent; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  -(phthalimidoperoxy)hexanoic acid)

RN 128275-31-0 HCAPLUS  
 CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)



IT 544-40-1, Dibutyl sulfide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (sulfide starting material; preparation of an organic compound comprising at least one oxygenated functional group by oxidation with an imidoarom. percarboxylic acid, in particular  $\epsilon$  -(phthalimidoperoxy)hexanoic acid)

RN 544-40-1 HCAPLUS  
 CN Butane, 1,1'-thiobis- (9CI) (CA INDEX NAME)

n-Bu-S-Bu-n

L25 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:802613 HCAPLUS  
 DN 141:314329  
 ED Entered STN: 01 Oct 2004  
 TI A process for preparation of organic compounds containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid  
 IN Allegrini, Pietro; Napoletano, Caterina; Razzetti, Gabriele; Castaldi, Graziano  
 PA Dinamite Dipharma S.p.A., Italy  
 SO U.S. Pat. Appl. Publ., 5 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C07C317-02

INCL 548366100; 564162000; 568027000; 568028000

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

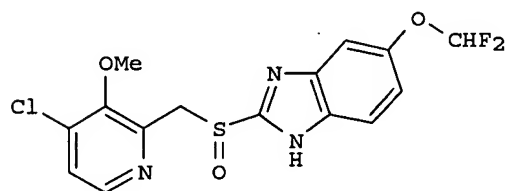
Section cross-reference(s): 45

FAN.CNT 1

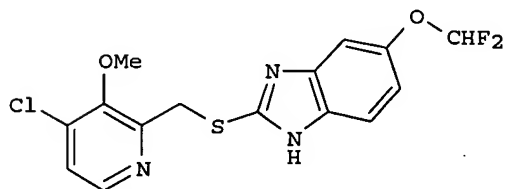
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004192929	A1	20040930	US 2004-801608	20040317
	EP 1466897	A1	20041013	EP 2004-5420	20040308
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
	CA 2461833	AA	20040928	CA 2004-2461833	20040325
PRAI	IT 2003-MI617	A	20030328		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004192929	ICM	C07C317-02
	INCL	548366100; 564162000; 568027000; 568028000
US 2004192929	NCL	548/366.100; 564/162.000; 568/027.000; 568/028.000
	ECLA	C07C315/02; C07D401/12+235C+211
EP 1466897	ECLA	C07C315/02; C07D401/12+235C+211
OS	CASREACT	141:314329
GI		



I



II

AB The invention relates to a process of oxidation of thioethers to sulfoxides or sulfones. The oxidation of sulfoxides to sulfones by treatment of thioethers or sulfoxides with an oxidizing amount of phthalimidoperhexanoic acid is useful for the preparation of pharmaceuticals for human or veterinary use. For instance, benzimidazole derivative I was prepared via oxidation of II by phthalimidoperhexanoic acid with a yield of 88.8% (example 1).

Phthalimidoperhexanoic acid is a stable, com. available, solid, and cheap oxidizing agent.

ST sulfinyl sulfonyl compd manuf prepn; thioether oxidn  
phthalimidoperhexanoic acid

IT Oxidation

(catalytic; process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

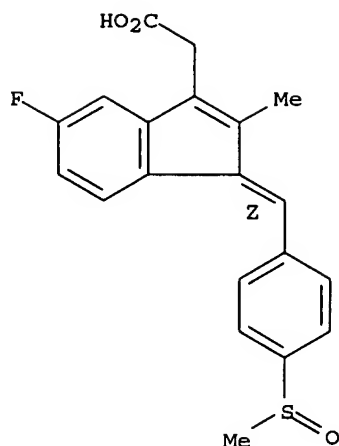
IT Oxidation catalysts

(process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)

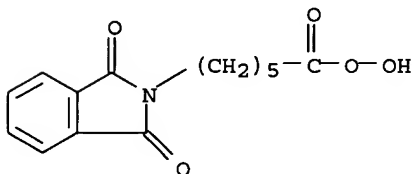
- IT Sulfonyl compounds  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT Thioethers  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT Functional groups  
 (sulfinyl group; process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT 68693-11-8P, Modafinil  
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT 38194-50-2P, Sulindac 118779-53-6P 409098-86-8P  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT 139-65-1 23593-22-8 36187-57-2, 1-(4-Fluorophenyl)-2-(4-methylthiophenyl)ethanone 49627-27-2 63547-22-8, 2-[(Diphenylmethyl)thio]acetic acid 68524-30-1 73590-85-9 102625-64-9 117977-21-6 368890-20-4 765929-44-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT 36187-64-1P 63547-24-0P, 2-[(Diphenylmethyl)sulfinyl]acetic acid  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT 128275-31-0, Phthalimidoperhexanoic acid  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- IT 38194-50-2P, Sulindac  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group via oxidation of thioethers by phthalimidoperhexanoic acid)
- RN 38194-50-2 HCAPLUS
- CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylsulfinyl)phenyl]methylene]-, (1Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.





IT 128275-31-0, Phthalimidoperoxhexanoic acid  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (process for preparation of organic compound containing sulfinyl or sulfonyl group  
 via oxidation of thioethers by phthalimidoperoxhexanoic  
 acid)  
 RN 128275-31-0 HCAPLUS  
 CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA  
 INDEX NAME)



L25 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2001:726141 HCAPLUS  
 DN 136:90120  
 ED Entered STN: 05 Oct 2001  
 TI New  $\omega$ -phthalimidoperoxyalkanoic acids in decontamination.  
 Destruction of some toxic organophosphorus and organosulfur pollutants  
 AU Lion, Claude; Da Conceicao, Louis; Delmas, Gerard; Magnaud, Gilbert  
 CS Institut de Topologie et de Dynamique des Systemes, Universite de Paris 7,  
 Paris, 75005, Fr.  
 SO New Journal of Chemistry (2001), 25(9), 1182-1184  
 CODEN: NJCHE5; ISSN: 1144-0546  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 CC 60-2 (Waste Treatment and Disposal)  
 Section cross-reference(s): 5, 50  
 AB Chemical decontamination of toxic compds. (chemical warfare agents and/or  
 insecticides) is of increasing importance. We report the use of  
 $\omega$ -phthalimidoperoxyalkanoic acids in the destruction of paraoxon  
 (di-Et p-nitrophenyl phosphate), a well-known insecticide, and  
 2-chloro-2'-phenyldiethyl sulfide (a half mustard). We show that while  
 all the peroxy acids used in this series allow the destruction of toxic  
 compds., the length n of the alkanolic side chain is important to the  
 choice of the optimal industrial compound, which is 6-  
 phthalimidoperoxyhexanoic acid (n = 5).  
 ST phthalimidoperoxyalkanoic acid destruction toxic organophosphorus

organosulfur pollutant; insecticide organophosphorus organosulfur  
destruction phthalimidoperoxyalkanoic acid

IT Wastewater treatment  
(decomposition; phthalimidoperoxyalkanoic acids in decontamination and  
destruction of toxic organophosphorus and organosulfur pollutants)

IT Chemical warfare agents  
Insecticides  
(phthalimidoperoxyalkanoic acids in decontamination and destruction of  
toxic organophosphorus and organosulfur pollutants)

IT Wastes  
(toxic; phthalimidoperoxyalkanoic acids in decontamination and  
destruction of toxic organophosphorus and organosulfur pollutants)

IT 5797-07-9 124931-51-7, 2H-Isoindole-2-butaneperoxoic acid,  
1,3-dihydro-1,3-dioxo- 128275-31-0, 6-Phthalimidoperoxyhexanoic  
acid 179639-14-6 386210-37-3 386210-38-4  
RL: NUU (Other use, unclassified); USES (Uses)  
(phthalimidoperoxyalkanoic acids in decontamination and destruction of  
toxic organophosphorus and organosulfur pollutants)

IT 139-66-2, Diphenyl sulfide 311-45-5, Paraoxon 544-40-1  
, Dibutyl sulfide 99188-19-9  
RL: REM (Removal or disposal); PROC (Process)  
(phthalimidoperoxyalkanoic acids in decontamination and destruction of  
toxic organophosphorus and organosulfur pollutants)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

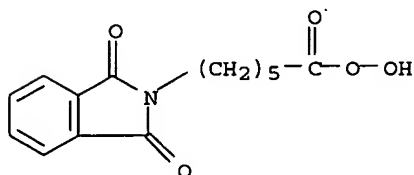
RE

- (1) Brown, H; J Am Chem Soc 1970, V92, P6660 HCAPLUS
- (2) Delmas, G; FR 2276368 1991 HCAPLUS
- (3) Feldhues, M; Tetrahedron 1985, V41, P4195 HCAPLUS
- (4) Gethoffer, H; DE 4003309 1991 HCAPLUS
- (5) Gethoffer, H; US 5061807 1991 HCAPLUS
- (6) Gonzaga, F; New J Chem 2001, V25, P151 HCAPLUS
- (7) Hauptmann, S; J Prakt Chem 1966, V34, P262 HCAPLUS
- (8) Julia, S; J Chem Soc, Chem Commun 1978, P742 HCAPLUS
- (9) Leblanc, A; FR 9203627 1992
- (10) Leblanc, A; Phosphorus, Sulfur Silicon Relat Elem 1993, V79, P141 HCAPLUS
- (11) Lion, C; FR 8911133 1989
- (12) Lion, C; FR 9603204 1996
- (13) Lion, C; US 6143088 2000 HCAPLUS
- (14) Lion, C; Bull Soc Chim Belg 1990, V99, P127 HCAPLUS
- (15) Lion, C; Bull Soc Chim Belg 1991, V100, P555 HCAPLUS
- (16) Lion, C; Bull Soc Chim Belg 1992, V101, P249 HCAPLUS
- (17) Lion, C; Bull Soc Chim Belg 1997, V106, P221 HCAPLUS
- (18) Lion, C; C R Acad Sci, Ser IIC 1999, V2, P57 HCAPLUS
- (19) Lion, C; Phosphorus, Sulfur Silicon Relat Elem 1991, V56, P213 HCAPLUS

IT 128275-31-0, 6-Phthalimidoperoxyhexanoic acid  
RL: NUU (Other use, unclassified); USES (Uses)  
(phthalimidoperoxyalkanoic acids in decontamination and destruction of  
toxic organophosphorus and organosulfur pollutants)

RN 128275-31-0 HCAPLUS

CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA  
INDEX NAME)



IT 139-66-2, Diphenyl sulfide 544-40-1, Dibutyl sulfide  
RL: REM (Removal or disposal); PROC (Process)  
(phthalimidoperoxyalkanoic acids in decontamination and destruction of  
toxic organophosphorus and organosulfur pollutants)

RN 139-66-2 HCAPLUS  
 CN Benzene, 1,1'-thiobis- (9CI) (CA INDEX NAME)

Ph-S-Ph

RN 544-40-1 HCAPLUS  
 CN Butane, 1,1'-thiobis- (9CI) (CA INDEX NAME)

n-Bu-S-Bu-n

L25 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:578597 HCAPLUS

DN 135:124156

ED Entered STN: 10 Aug 2001

TI Bactericide combinations in detergents

IN Elsmore, Richard; Houghton, Mark Phillip

PA Robert McBride Ltd., UK

SO Brit. UK Pat. Appl., 53 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM C11D003-48

CC 46-6 (Surface Active Agents and Detergents)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2354771	A1	20010404	GB 1999-23253	19991001
PRAI	GB 1999-23253		19991001		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	GB 2354771	ICM	C11D003-48
	GB 2354771	ECLA	C11D003/00B13; C11D003/386
AB	The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2.		
ST	bactericide surfactant detergent		
IT	Balsams RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (Canada; bactericide combinations in detergents)		
IT	Amine oxides RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (C10-16-alkyldimethyl; bactericide combinations in detergents)		
IT	Quaternary ammonium compounds, uses RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (C12-14-alkyltrimethyl, chlorides; bactericide combinations in detergents)		
IT	Amines, uses RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (C12-18-alkyl; bactericide combinations in detergents)		
IT	Amines, uses RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)		

(C14-18-alkyl; bactericide combinations in detergents)

IT Alcohols, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (C16-18, ethoxylated; bactericide combinations in detergents)

IT Fatty acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (C16-18, phentachlorophenyl esters; bactericide combinations in  
 detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (C16-18-unsatd. alkyl; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (C8-10-alkyl; bactericide combinations in detergents)

IT Fatty acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (C8-10; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (C8-18-alkyl; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (N-C10-18-alkyltrimethylenediamines, reaction products with  
 chloroacetic acid; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (N-coco alkyltrimethylenediamines; bactericide combinations in  
 detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (N-tallow alkyltrimethylenediamines, ethoxylated; bactericide  
 combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (N-tallow alkyltrimethylenediamines; bactericide combinations in  
 detergents)

IT Balsams  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (Peru; bactericide combinations in detergents)

IT Resins  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (Siam gum benzoin; bactericide combinations in detergents)

IT Anthracene oil  
 (acid extract for bactericide combinations in detergents)

IT Pimenta  
 (acris; extract for bactericide combinations in detergents)

IT Carboxylic acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (aliphatic, salts; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (alkylbenzyl dimethyl, chlorides; bactericide combinations in

detergents)

IT Surfactants  
(amphoteric; bactericide combinations in detergents)

IT Surfactants  
(anionic; bactericide combinations in detergents)

IT Antibacterial agents  
Creosote  
(bactericide combinations in detergents)

IT Asphalt  
Coconut oil  
Creosote oil  
Epoxy resins, uses  
Hydrocarbon oils  
Paraffin oils  
Pyrethrins  
Tar acids  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(benzyl-C12-14-alkyldimethyl, chlorides; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(benzyl-C12-16-alkyldimethyl, chlorides; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(benzyl-C12-18-alkyldimethyl, chlorides; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(benzyl-C12-18-alkyldimethyl, salts with 1,2-benzisothiazol-3(2H)-one 1,1-dioxide (1:1); bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(benzyl-C16-18-alkyldimethyl, chlorides; bactericide combinations in detergents)

IT Almond (*Prunus amygdalus*)  
(bitter; extract for bactericide combinations in detergents)

IT Essential oils  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(cade; bactericide combinations in detergents)

IT Essential oils  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(cassia; bactericide combinations in detergents)

IT Secretions (external)  
(castoreum; bactericide combinations in detergents)

IT Surfactants  
(cationic; bactericide combinations in detergents)

IT Essential oils  
RL: MOA (Modifier or additive use); USES (Uses)  
(cedar; for bactericide combinations in detergents)

IT Essential oils  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(clove; bactericide combinations in detergents)

IT Amines, uses

RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (coco alkyl, acetates; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (coco alkyl; bactericide combinations in detergents)

IT Amines, uses  
 Betaines  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (coco alkyl dimethyl; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (coco alkyl trimethyl, chlorides; bactericide combinations in detergents)

IT Fatty acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (coco, reaction products with aminoethylaminoethanol, quaternized; bactericide combinations in detergents)

IT Amine oxides  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (coco alkyl dimethyl; bactericide combinations in detergents)

IT Balsams  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (copaiba; bactericide combinations in detergents)

IT Naphthenic acids, uses  
 Resin acids  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (copper salts; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (cypress; bactericide combinations in detergents)

IT Polysulfides  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (di-tert-nonyl; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (dialkyl dimethyl, chlorides; bactericide combinations in detergents)

IT Quaternary ammonium compounds, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (dicoco alkyl dimethyl, chlorides; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (dimethyl tallow alkyl; bactericide combinations in detergents)

IT Coal tar  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (distillate; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (eucalyptus; bactericide combinations in detergents)

IT *Abelmoschus moschatus*  
 Allspice (*Pimenta dioica*)

Amyris balsamifera  
Angelica archangelica  
Aniba rosaeodora  
Anise  
Artemisia  
Artemisia maritima  
Camphor tree (Cinnamomum camphora)  
Capsicum frutescens  
Caraway (Carum carvi)  
Chrysanthemum cinerariaefolium  
Cinnamomum zeylanicum  
Cistus ladanifer  
Citrus medica  
Coriander  
Cumin  
Cymbopogon citratus  
Cymbopogon nardus  
Cymbopogon winterianus  
Dill  
Dipteryx odorata  
Evernia furfuracea  
Evernia prunastri  
Fennel (Foeniculum vulgare)  
Fennel (Foeniculum vulgare vulgare)  
Fir (Abies balsamea)  
Gaultheria procumbens  
Ginger  
Grapefruit  
Guaiacum officinale  
Hay  
Hedeoma pulegioides  
Helichrysum stoechas  
Iris pseudacorus  
Jasmine (Jasminum grandiflorum)  
Juniper (Juniperus communis)  
Juniper (Juniperus mexicana)  
Juniper (Juniperus virginiana)  
Laurus nobilis  
Lavender (Lavandula hybrida)  
Lavender (Lavandula spica)  
Lime (Citrus aurantifolia)  
Mandarin orange  
Melaleuca alternifolia  
Mentha arvensis piperascens  
Musks  
Myristica fragrans  
Narcissus juncifolius  
Parsley (Petroselinum crispum)  
Patchouli  
Peppermint (Mentha piperita)  
Pimenta racemosa  
Pine (Pinus)  
Pine (Pinus pumila)  
Pine (Pinus sylvestris)  
Propolis  
Rose (Rosa damascena)  
Rosemary  
Sage (Salvia sclarea)  
Sandalwood (Santalum album)  
Spanish marjoram  
Spartium junceum  
Spearmint (Mentha spicata)  
St.-John's-wort (Hypericum perforatum)  
Star anise (Illicium verum)  
Thyme (Thymus capitatus)  
Vaccinium myrtillus

Valerian (Valeriana)  
 Vetiveria zizanioides  
 Viola odorata  
 Wheat  
 Ylang-ylang (Cananga odorata)  
 (extract for bactericide combinations in detergents)

IT Bergamot (Citrus bergamia)  
 Birch (Betula lenta)  
 Birch (Betula pendula)  
 Ocimum basilicum  
 Savory (Satureja hortensis)  
 (extract; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (geranium; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (hydrogenated tallow alkyl, acetates; bactericide combinations in detergents)

IT Resin acids  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (hydrogenated, Me esters; bactericide combinations in detergents)

IT Collagens, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (hydrolyzates, [3-(dodecyldimethylammonio)-2-hydroxypropyl], chlorides;  
 bactericide combinations in detergents)

IT Naphthenic acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (iron salts; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (lavender; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (lemon, extraction residues; bactericide combinations in detergents)

IT Detergents  
 (liquid; bactericide combinations in detergents)

IT Fats and Glyceridic oils, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (margosa; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (mint, Mentha; bactericide combinations in detergents)

IT Perfumes  
 (myrrh; extract for bactericide combinations in detergents)

IT Surfactants  
 (nonionic; bactericide combinations in detergents)

IT Resins  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (olibanum; bactericide combinations in detergents)

IT Resins  
 (opopanax; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (peppermint; bactericide combinations in detergents)



IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (pine; bactericide combinations in detergents)

IT Fatty acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (potassium salts; bactericide combinations in detergents)

IT Protein hydrolyzates  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (reaction products with undecenoyl chloride, salts; bactericide combinations in detergents)

IT Pelargonium graveolens  
 (saponified extract for bactericide combinations in detergents)

IT Orange  
 (sour; extract for bactericide combinations in detergents)

IT Balsams  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (storax; bactericide combinations in detergents)

IT Orange  
 (sweet, Valencia; extract for bactericide combinations in detergents)

IT Almond (*Prunus amygdalus*)  
 Orange  
 (sweet; extract for bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (tallow alkyl, ethoxylated, reaction products with chloroacetic acid; extract for bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (tallow alkyl; bactericide combinations in detergents)

IT Fatty acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (tallow, reaction products with triethanolamine, quaternized; bactericide combinations in detergents)

IT Essential oils  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (thyme, *Thymus vulgaris*; bactericide combinations in detergents)

IT Balsams  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (tolu; bactericide combinations in detergents)

IT Balsams  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (tonka bean; bactericide combinations in detergents)

IT Amines, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (unsatd., C18; bactericide combinations in detergents)

IT Naphthènic acids, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (zinc salts; bactericide combinations in detergents)

IT 58999-88-5D, 1-Propanaminium, 3-amino-N,N,N-trimethyl-, derivs.  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (N-C12-18 acyl derivs., Me sulfates; bactericide combinations in detergents)

IT 50-00-0, Formaldehyde, uses 50-00-0D, Formaldehyde, reaction products,

uses 50-14-6 50-21-5, uses 50-65-7 50-99-7, D-Glucose, uses  
 51-03-6 51-28-5, uses 52-51-7 52-68-6 54-21-7 54-64-8 55-38-9  
 55-56-1 55-86-7 56-35-9 56-36-0 56-37-1 56-38-2 56-95-1  
 57-09-0 57-10-3, Hexadecanoic acid, uses 57-15-8 57-24-9,  
 Strychnidin-10-one 57-55-6D, Propylene glycol, reaction products with  
 formaldehyde 58-36-6 58-89-9 59-50-7 59-87-0 60-12-8,  
 Benzenethanol 60-51-5 61-73-4 62-38-4 62-56-6, Thiourea, uses  
 62-73-7 63-25-2 64-18-6, Formic acid, uses 64-18-6D, Formic acid,  
 reaction products 64-19-7D, Acetic acid, derivs., uses 64-69-7  
 67-20-9 67-63-0D, 2-Propanol, reaction products with boron trifluoride  
 and 5-ethylidenebicyclo[2.2.1]hept-2-ene, uses 67-66-3, uses  
 67-68-5, uses 67-97-0 69-72-7, uses 70-55-3  
 71-23-8, 1-Propanol, uses 71-41-0, 1-Pentanol, uses 72-43-5 72-56-0  
 74-83-9, uses 75-12-7D, Formamide, reaction products with formaldehyde,  
 uses 75-21-8, Oxirane, uses 75-31-0, 2-Propanamine, uses 75-91-2  
 76-06-2 76-22-2 76-39-1 76-87-9 77-42-9 77-48-5 77-49-6  
 77-78-1D, Dimethyl sulfate, quaternized with 9-octadecenoic  
 acid/triethanolamine reaction products 77-78-1D, Dimethyl sulfate,  
 quaternized with fatty acid/triethanolamine reaction products 77-92-9,  
 uses 78-59-1 78-69-3 78-70-6 78-79-5D, Isoprene, reaction products  
 with acetic acid 78-83-1, uses 78-92-2, 2-Butanol 79-07-2 79-08-3  
 79-11-8, uses 79-11-8D, Chloroacetic acid, reaction products with  
 N-C10-16-alkyltrimethylenediamines 79-11-8D, Acetic acid, chloro-,  
 reaction products with diethylenetriamine N-mono- and di-C8-18-alkyl  
 derivs., uses 79-14-1, uses 79-20-9 79-21-0, Ethaneperoxoic acid  
 79-69-6 79-92-5D, 2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane,  
 reaction products with 2-methoxyphenol, hydrogenated 80-26-2 80-27-3  
 80-46-6 80-71-7 81-07-2D, 1,2-Benzisothiazol-3(2H)-one 1,1-dioxide,  
 salts with quaternary ammonium compds., benzyl-C12-18-alkyldimethyl (1:1)  
 81-14-1 81-15-2 81-81-2 81-82-3 82-66-6 83-34-1 83-79-4  
 84-65-1, 9,10-Anthracenedione 84-66-2 84-74-2 85-91-6 87-10-5  
 87-17-2 87-20-7 87-22-9 87-90-1 88-04-0 88-06-2 88-14-2,  
 2-Furancarboxylic acid 88-84-6 89-68-9 89-78-1 89-79-2 89-83-8  
 90-05-1D, Phenol, 2-methoxy-, reaction products with 2,2-dimethyl-3-  
 methylenebicyclo[2.2.1]heptane, hydrogenated 90-13-1 90-17-5  
 90-43-7, [1,1'-Biphenyl]-2-ol 90-43-7D, [1,1'-Biphenyl]-2-ol,  
 chlorinated 90-87-9 91-20-3, Naphthalene, uses 91-61-2 91-64-5,  
 2H-1-Benzopyran-2-one 93-15-2 93-16-3 93-51-6 93-59-4,  
 Benzenecarboxylic acid 93-65-2 93-69-6 93-89-0 94-13-3  
 94-18-8 94-26-8 94-36-0, uses 94-96-2 95-14-7, 1H-Benzotriazole  
 95-41-0 95-48-7, uses 96-24-2 96-29-7 97-23-4 97-24-5 97-54-1  
 97-77-8 98-01-1, 2-Furancarboxaldehyde, uses 98-11-3D,  
 Benzenesulfonic acid, mono-C10-14-alkyl derivs., compds. with Me  
 1H-benzimidazol-2-ylcarbamate, uses 98-53-3 98-55-5 99-49-0  
 99-76-3 99-86-5 100-37-8 100-44-7, uses 100-51-6, Benzenemethanol,  
 uses 100-52-7, Benzaldehyde, uses 100-73-2 100-86-7 100-89-0  
 100-97-0, uses 101-20-2 101-21-3 101-39-3 101-53-1 101-84-8  
 101-85-9 102-17-0 102-20-5 102-30-7 102-71-6D, copper complexes  
 102-71-6D, Triethanolamine, reaction products with 9-octadecenoic acid,  
 di-Me sulfate-quaternized 102-98-7 103-05-9 103-26-4 103-52-6  
 103-82-2, Benzenecarboxylic acid, uses 103-95-7 104-09-6 104-21-2  
 104-29-0 104-53-0, Benzenepropanal 104-54-1 104-55-2 104-60-9  
 104-61-0 104-62-1 104-67-6 104-76-7 104-78-9 104-87-0 105-01-1  
 105-66-8 105-85-1 105-87-3 105-90-8 106-22-9 106-24-1 106-25-2  
 106-30-9 106-44-5, uses 106-46-7 106-70-7 106-72-9 106-73-0  
 106-79-6 106-88-7 106-89-8, uses 107-02-8, 2-Propenal, uses  
 107-21-1D, Ethylene glycol, reaction products with formaldehyde  
 107-22-2, Ethanedial 107-41-5 107-43-7 107-75-5 107-95-9D,  
 β-Alanine, N-coco alkyl derivs. 108-16-7 108-39-4, uses  
 108-64-5 108-80-5, 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione 108-88-3,  
 uses 108-89-4 108-94-1, Cyclohexanone, uses 108-95-2, Phenol, uses  
 108-95-2D, Phenol, polypropene derivs., uses 108-99-6 109-21-7  
 109-89-7, uses 110-05-4 110-15-6, Butanedioic acid, uses 110-27-0  
 110-38-3 110-41-8 110-44-1 110-58-7, 1-Pentanamine 110-62-3,  
 Pentanal 110-75-8 110-86-1, Pyridine, uses 110-89-4, Piperidine,  
 uses 111-11-5 111-27-3, 1-Hexanol, uses 111-30-8, Pentanedial

RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)

(bactericide combinations in detergents)

IT 111-40-0D, 1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with  
1-chlorooctane 111-40-0D, Diethylenetriamine, reaction products with  
chloroacetic acid, N-mono- and di-C8-18-alkyl derivs. 111-41-1D,  
2-(2-Aminoethyl)aminoethanol, reaction with coco fatty acids, quaternized  
111-42-2, uses 111-46-6D, Diethylene glycol, reaction products with  
formaldehyde 111-61-5 111-81-9 111-82-0 111-85-3D, 1-Chlorooctane,  
reaction products with acetic acid and diethylenetriamine 111-85-3D,  
1-Chlorooctane, reaction products with N-(2-aminoethyl)-1,2-ethanediamine  
111-92-2 112-00-5 112-02-7 112-18-5 112-34-5D,  
2-(2-Butoxyethoxy)ethanol, reaction products with formaldehyde 112-38-9,  
10-Undecenoic acid 112-39-0 112-43-6, 10-Undecen-1-ol 112-45-8,  
10-Undecenal 112-53-8, 1-Dodecanol 112-54-9, Dodecanal 112-59-4  
112-61-8 112-69-6 112-72-1, 1-Tetradecanol 112-75-4 112-80-1D,  
9-Octadecenoic acid (9Z)-, reaction products with triethanolamine, di-Me  
sulfate-quaternized, uses 112-90-3 113-48-4 114-26-1 114-63-6  
115-29-7 115-31-1 115-32-2 115-71-9 116-25-6 117-18-0 117-52-2  
118-52-5 118-55-8 118-58-1 118-71-8 118-79-6 119-36-8  
119-61-9, uses 120-32-1 120-47-8 120-50-3 120-51-4 120-57-0,  
1,3-Benzodioxole-5-carboxaldehyde 120-72-9, 1H-Indole, uses 121-32-4  
121-33-5 121-44-8, uses 121-54-0 121-65-3 121-75-5 122-07-6  
122-14-5 122-18-9 122-19-0 122-34-9 122-40-7 122-42-9 122-48-5  
122-67-8 122-69-0 122-70-3 122-78-1, Benzeneacetaldehyde 122-97-4,  
Benzeneopropanol 122-99-6 123-05-7 123-11-5, uses 123-29-5  
123-30-8 123-32-0 123-66-0 124-04-9, Hexanedioic acid, uses  
124-07-2, Octanoic acid, uses 124-09-4, 1,6-Hexanediamine, uses  
124-13-0, Octanal 124-19-6, Nonanal 124-22-1, 1-Dodecanamine  
124-43-6 124-65-2 124-76-5 126-06-7 126-11-4 126-15-8 126-91-0  
127-41-3 127-43-5 127-51-5 127-65-1 127-90-2 127-91-3  
128-03-0 128-04-1 128-08-5 128-09-6 129-06-6 131-11-3 131-52-2  
132-27-4 133-06-2 133-07-3 133-53-9 134-20-3 134-28-1 134-62-3  
135-79-5 136-45-8 136-53-8 136-77-6 136-85-6 137-16-6 137-26-8  
137-30-4 137-40-6 137-41-7 137-42-8 138-93-2 139-07-1 139-08-2  
140-10-3, uses 140-11-4 140-39-6 140-72-7 140-95-4 141-94-6  
142-18-7 142-59-6 142-62-1, Hexanoic acid, uses 142-71-2 143-07-7,  
Dodecanoic acid, uses 143-08-8, 1-Nonanol 143-14-6, 9-Undecenal  
143-50-0 144-55-8, Carbonic acid monosodium salt, uses 144-62-7,  
Ethanedioic acid, uses 147-71-7 148-24-3, 8-Quinolinol, uses  
148-79-8 149-30-4, 2(3H)-Benzothiazolethione 149-57-5 150-78-7  
150-84-5 151-01-9 151-21-3, uses 156-62-7 298-12-4 299-84-3  
300-76-5 302-01-2, Hydrazine, uses 330-54-1 333-41-5 334-48-5,  
Decanoic acid 359-37-5 379-52-2 404-86-4 470-43-9 470-82-6  
473-34-7 475-20-7D, reaction products with formic acid and boron  
trifluoride 488-10-8 489-86-1 498-81-7 499-83-2,  
2,6-Pyridinedicarboxylic acid 502-61-4 504-24-5, 4-Pyridinamine  
507-60-8 507-70-0 514-51-2 515-00-4 515-69-5 520-45-6 527-07-1  
532-32-1 533-74-4 534-18-9 535-89-7 536-59-4 536-60-7 538-71-6  
539-82-2 539-90-2 541-91-3 544-63-8, Tetradecanoic acid, uses  
551-92-8 556-61-6 557-08-4 576-55-6 577-11-7 582-25-2  
584-79-2 589-38-8, 3-Hexanone 589-66-2 591-12-8 597-09-1  
615-62-3 620-23-5 621-82-9, uses 624-15-7 625-51-4 626-82-4  
628-63-7 638-37-9, Butanedial 639-58-7 643-79-8,  
1,2-Benzenedicarboxaldehyde 646-06-0, 1,3-Dioxolane 659-40-5  
683-10-3 688-73-3D, Stannane, tributyl-, mono(naphthenoxyloxy) derivs.  
692-86-4 695-10-3D, 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-nortall-oil  
alkyl derivs. 696-59-3 699-02-5 705-86-2 706-14-9 719-96-0  
731-27-1 762-26-5 770-35-4 789-02-6 821-55-6, 2-Nonanone  
825-51-4 828-00-2 870-72-4 886-50-0 900-95-8 925-78-0,  
3-Nonanone 929-73-7 959-55-7 971-66-4 991-42-4 996-35-0  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)

(bactericide combinations in detergents)

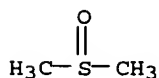
IT 1000-82-4 1066-30-4 1067-97-6 1085-12-7 1085-98-9  
1111-67-7 1119-94-4 1119-97-7 1120-24-7 1120-48-5 1121-30-8

1121-31-9 1123-85-9 1135-66-6 1192-52-5 1205-17-0 1209-61-6  
 1222-05-5 1300-71-6 1303-28-2, Arsenic oxide (As<sub>2</sub>O<sub>5</sub>) 1303-86-2,  
 Boron oxide (B<sub>2</sub>O<sub>3</sub>), uses 1303-96-4D, Borax (B<sub>4</sub>Na<sub>2</sub>O<sub>7</sub>·10H<sub>2</sub>O), reaction  
 products with sulfuric acid 1305-78-8, Calcium oxide, uses 1309-48-4,  
 Magnesium oxide (MgO), uses 1310-58-3, Potassium hydroxide (K(OH)), uses  
 1310-73-2, Sodium hydroxide (Na(OH)), uses 1314-13-2, Zinc oxide (ZnO),  
 uses 1314-84-7, Zinc phosphide (Zn<sub>3</sub>P<sub>2</sub>) 1317-38-0, Copper oxide (CuO),  
 uses 1317-39-1, Copper oxide (Cu<sub>2</sub>O), uses 1319-77-3 1320-44-1  
 1322-14-1 1323-00-8 1327-53-3, Arsenic oxide (As<sub>2</sub>O<sub>3</sub>) 1330-43-4,  
 Boron sodium oxide (B<sub>4</sub>Na<sub>2</sub>O<sub>7</sub>) 1331-83-5 1332-07-6 1332-65-6, Copper  
 chloride hydroxide (Cu<sub>2</sub>Cl(OH)<sub>3</sub>) 1333-53-5 1333-58-0 1333-82-0,  
 Chromium oxide (CrO<sub>3</sub>) 1333-83-1, Sodium fluoride (Na(HF<sub>2</sub>)) 1334-78-7  
 1335-10-0 1335-12-2 1335-46-2 1341-49-7, Ammonium fluoride  
 ((NH<sub>4</sub>)(HF<sub>2</sub>)) 1405-92-1 1414-45-5, Nisin A 1438-94-4 1446-61-3  
 1490-04-6 1634-02-2 1643-20-5 1696-17-9 1715-30-6 1777-82-8  
 1854-23-5 1854-26-8 1875-89-4 1885-38-7 1892-43-9 1897-45-6  
 1983-10-4 2016-56-0 2019-69-4 2032-65-7 2050-08-0  
 2090-05-3 2104-96-3 2120-70-9 2155-70-6 2216-51-5 2224-44-4  
 2244-16-8 2244-21-5 2275-23-2 2279-96-1, Butanediperoxoic acid  
 2305-25-1 2310-17-0 2372-82-9 2374-05-2 2390-68-3 2436-90-0  
 2439-10-3 2445-76-3 2463-53-8, 2-Nonenal 2491-38-5 2492-26-4  
 2500-83-6 2527-57-3 2527-58-4 2565-36-8 2571-88-2 2631-40-5  
 2634-33-5, 1,2-Benzisothiazol-3(2H)-one 2639-63-6 2682-20-4  
 2756-56-1 2782-57-2 2832-19-1 2871-78-5 2875-41-4D, Glycine,  
 N-(3-aminopropyl)-, N'-C10-16-alkyl derivs., hydrochlorides 2893-78-9  
 2921-88-2 3006-10-8 3033-23-6 3064-70-8 3090-35-5 3142-72-1  
 3228-02-2 3302-10-1 3313-92-6 3332-27-2 3380-34-5  
 3383-96-8 3398-33-2 3547-33-9 3586-55-8 3691-35-8  
 3696-28-4 3697-42-5 3710-84-7 3766-81-2 3784-03-0 3785-34-0  
 3811-68-5 3811-73-2 3811-75-4 3851-97-6 3926-62-3D, Acetic acid,  
 chloro-, sodium salt, reaction products with 4,5-dihydro-1H-imidazole-1-  
 ethanol 2-norcoco alkyl derivs. and sodium hydroxide 3926-62-3D, Sodium  
 chloroacetate, reaction products with B-C12-18 alkylmethylenediamines  
 3984-22-3 4075-81-4 4080-31-3 4151-50-2 4169-04-4 4180-23-8  
 4182-44-9 4191-73-5 4247-02-3 4299-07-4 4299-60-9 4317-72-0  
 4317-79-7 4342-36-3 4454-05-1D, reaction products with ethanol  
 4525-33-1 4574-04-3 4602-84-0 4707-47-5 4719-04-4 4724-48-5  
 4824-78-6 4940-11-8 5026-62-0 5039-78-1 5153-25-3 5197-80-8  
 5329-14-6, Sulfamic acid 5332-73-0 5392-40-5 5395-50-6  
 5437-45-6 5454-19-3 5462-06-6 5471-51-2 5538-94-3 5538-95-4  
 5598-13-0 5625-90-1 5725-96-2 5836-29-3 5915-41-3 5972-76-9  
 6001-64-5 6011-99-0 6051-03-2 6152-33-6 6317-18-6 6324-78-3  
 6378-65-0 6413-26-9 6440-58-0 6485-40-1 6542-37-6 6582-31-6  
 6834-92-0 6843-97-6 6915-15-7 6939-35-1 6988-21-2 7080-50-4  
 7166-19-0 7173-51-5 7173-62-8 7281-04-1 7287-19-6  
 7320-34-5 7378-99-6 7440-22-4, Silver, uses 7440-50-8, Copper, uses  
 7446-20-0, Zinc sulfate heptahydrate 7491-20-5 7491-21-6 7492-67-3  
 7540-51-4 7549-37-3 7553-56-2, Iodine, uses 7601-54-9D, Trisodium  
 phosphate, chlorinated 7631-89-2 7631-90-5 7632-04-4 7637-07-2D,  
 Boron trifluoride, reaction products with 2-propanol and  
 5-ethylidenebicyclo[2.2.1]hept-2-ene 7640-33-7 7646-85-7, Zinc  
 chloride (ZnCl<sub>2</sub>), uses 7647-01-0, Hydrochloric acid, uses 7647-15-6,  
 Sodium bromide (NaBr), uses 7664-38-2, Phosphoric acid, uses  
 7664-41-7, Ammonia, uses 7664-93-9, Sulfuric acid, uses 7681-49-4,  
 Sodium fluoride (NaF), uses 7681-52-9 7681-55-2 7681-57-4  
 7681-93-8 7696-12-0 7697-37-2, Nitric acid, uses 7699-45-8, Zinc  
 bromide (ZnBr<sub>2</sub>) 7704-34-9, Sulfur, uses 7722-64-7 7722-84-1,  
 Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), uses 7722-86-3, Peroxymonosulfuric acid  
 7726-95-6, Bromine, uses 7727-21-1  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (bactericide combinations in detergents)  
 IT 7733-02-0 7747-35-5 7757-81-5 7757-83-7 7758-02-3, Potassium  
 bromide (KBr), uses 7758-19-2 7758-89-6, Copper chloride (CuCl)  
 7758-98-7, Sulfuric acid copper(2+) salt (1:1), uses 7758-99-8  
 7775-09-9 7775-27-1 7778-39-4, Arsenic acid (H<sub>3</sub>AsO<sub>4</sub>) 7778-43-0

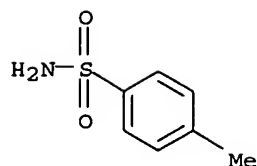
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 7779-81-9 7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses  
 7783-20-2, Sulfuric acid diammonium salt, uses 7783-90-6, Silver  
 chloride (AgCl), uses 7786-29-0 7786-30-3, Magnesium chloride (MgCl<sub>2</sub>),  
 uses 7789-09-5 7789-12-0 7789-29-9, Potassium fluoride (K(HF<sub>2</sub>))  
 7789-33-5, Iodine bromide (IBr) 7790-28-5 7790-99-0, Iodine chloride  
 (ICl) 7803-51-2, Phosphine 8000-41-7, Terpeneol 8007-35-0  
 8018-01-7 9001-37-0 9002-91-9 9003-07-0D, Polypropylene, phenol  
 derivs. 9003-29-6 9003-63-8 9003-99-0, Peroxidase 9004-82-4  
 9004-98-2 10028-15-6, Ozone, uses 10031-43-3 10032-15-2  
 10043-35-3, Boric acid (H<sub>3</sub>BO<sub>3</sub>), uses 10049-04-4, Chlorine oxide (ClO<sub>2</sub>)  
 10058-23-8 10101-41-4 10124-37-5 10154-75-3 10187-52-7  
 10198-23-9 10222-01-2 10222-01-2 10235-63-9 10294-64-1  
 10332-33-9 10339-55-6 10345-79-6 10377-60-3 10378-23-1  
 10380-28-6 10453-86-8 10460-00-1 10482-56-1 10486-00-7  
 10543-57-4 10588-01-9 10588-15-5 10595-49-0 10605-21-7  
 10605-21-7D, Methyl 1H-benzimidazol-2-ylcarbamate, compds. with  
 benzenesulfonic acid mono-ClO-14-alkyl derivs. 11031-45-1, Santalol  
 11050-62-7 11084-85-8, Sodium hypochlorite phosphate (Na<sub>13</sub>(ClO)(PO<sub>4</sub>)<sub>4</sub>)  
 11096-42-7 12008-41-2, Boron sodium oxide (B<sub>8</sub>Na<sub>2</sub>O<sub>13</sub>) 12062-24-7  
 12069-69-1 12122-67-7 12124-97-9, Ammonium bromide ((NH<sub>4</sub>)Br)  
 12179-04-3 12267-73-1 12280-03-4 12427-38-2 13014-03-4  
 13019-22-2, 9-Decen-1-ol 13052-19-2 13108-52-6 13149-79-6  
 13167-25-4 13197-76-7 13254-34-7 13351-61-6 13426-91-0  
 13435-05-7 13463-41-7 13463-67-7, Titanium oxide (TiO<sub>2</sub>), uses  
 13516-27-3 13517-11-8, Hypobromous acid 13532-18-8 13590-97-1  
 13701-59-2 13707-65-8 13720-12-2 13755-29-8 13824-96-9  
 13826-83-0 13840-33-0 13863-41-7, Bromine chloride (BrCl) 13877-91-3  
 13980-04-6 14073-97-3 14371-10-9 14548-60-8 14576-08-0  
 14667-55-1 14676-61-0D, 1-Propanamine, 3-(tridecyloxy)-, branched  
 14762-38-0 14816-18-3 14915-37-8 14936-67-5 15323-35-0  
 15435-29-7 15510-55-1 15627-09-5 15630-89-4 15707-23-0  
 15733-22-9 15739-09-0 15809-19-5 15986-80-8 16079-88-2  
 16219-75-3D, 5-Ethylidenebicyclo[2.2.1]hept-2-ene, reaction products with  
 boron trifluoride and 2-propanol 16228-00-5 16409-43-1 16491-36-4  
 16752-77-5 16828-95-8 16871-71-9 16893-85-9 16919-19-0  
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 20662-57-1 20679-58-7 20834-59-7 20859-73-8, Aluminum phosphide  
 (AlP) 21129-27-1 21145-77-7 21564-17-0 21757-82-4 21834-92-4  
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 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (biological study); USES (Uses)  
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 Oxacycloheptadec-10-en-2-one 28728-61-2 28772-56-7 28777-01-7  
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 36362-09-1 36631-23-9 36734-19-7 37139-99-4 37228-06-1  
 37306-10-8, Chromium copper boride 38083-17-9 38260-54-7  
 38460-95-6D, 10-Undecenoyl chloride, reaction products with protein  
 hydrolyzates, potassium salts 38465-60-0 38664-03-8 38811-14-2  
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 1H-Benzimidazole-2-pentanamine 39660-17-8 39758-90-2 40027-80-3  
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 boride 54464-57-2 54720-15-9 54779-21-4 55142-08-0 55406-53-6  
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 56709-13-8 56996-62-4, Glokill 77 57006-76-5 57382-78-2 57413-95-3  
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 58249-25-5 58769-20-3 59323-76-1 59324-17-3 59355-53-2, Citrex S 5  
 60114-62-7D, 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,  
 N-coco acyl derivs., inner salts 60168-88-9 60207-31-0 60207-90-1  
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 62476-84-0D, Guanidine, N,N''-1,3-propanediylbis-, N-coco alkyl derivs.,  
 acetates 62755-21-9 63085-03-0 63333-35-7 63500-71-0 63943-38-4  
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 66063-61-4 66065-55-2D, Benzenemethanaminium, N-(3-aminopropyl)-N,N-  
 dimethyl-, chloride, N-coco acyl derivs. 66091-24-5D, 1-Propanaminium,  
 3-amino-N-ethyl-N,N-dimethyl-, N-lanolin acyl derivs., Et sulfates  
 66204-44-2 66215-27-8 66789-18-2 66841-25-6 67100-72-5  
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 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (bactericide combinations in detergents)  
 IT 72089-08-8 72490-01-8 72963-72-5 73264-51-4 73337-96-9D,  
 β-Alanine, N-(2-aminoethyl)-N-(2-hydroxyethyl)-, N-C8-18-acyl derivs.  
 74774-67-7 75033-25-9 75147-23-8 76382-10-0D, β-Alanine,  
 N-(3-aminopropyl)-, N-coco alkyl derivs. 76653-57-1 76653-58-2  
 76733-35-2 76749-58-1 76902-90-4 77492-36-5 77492-37-6  
 77492-44-5 78144-21-5 78491-02-8 78587-05-0 79267-18-8  
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 81412-43-3, Tridemorph 81741-28-8 81786-73-4 81786-74-5 81786-75-6  
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 84233-92-1 84473-74-5 84631-78-7 84643-53-8 85264-33-1  
 86115-11-9 86479-06-3 86880-59-3D, N-coco acyl derivs. 87118-95-4  
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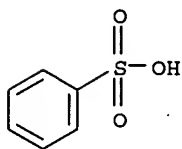
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 126646-06-8 126646-07-9 128275-31-0 136426-54-5  
 138261-41-3 138265-88-0, Boron zinc hydroxide oxide (B12Zn4(OH)14O15)  
 138416-95-2 138698-36-9 140194-01-0, 1,1,3-Propanetricarboxaldehyde  
 140194-02-1 144768-02-5 146919-78-0 149118-66-1 154194-73-7  
 154339-84-1, Silver sodium zirconium phosphate  
 (Ag0.19Na0.47Zr2(HPO4)0.34(PO4)2.66) 154339-85-2 173291-51-5  
 173423-45-5, Silver sodium zirconium phosphate  
 (Ag0.44Na0.25Zr2(HPO4)0.3(PO4)2.7) 187615-12-9 188739-94-8  
 191546-07-3 191546-08-4 199169-27-2 216770-11-5, Silver sodium  
 zirconium phosphate (Ag0.05Na0.3Zr2(HPO4)0.65(PO4)2.35) 251089-42-6  
 344931-17-5D, 1-Propanaminium, 3-amino-N-[2-[(2-hydroxyethyl)amino]-2-  
 oxoethyl]-N,N-dimethyl-, chloride, N-C16-18 acyl derivs. 351224-25-4  
 351224-26-5  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (bactericide combinations in detergents)  
 IT 9001-92-7, Protease  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (bactericide combinations in detergents)  
 IT 87-86-5, Pentachlorophenol  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (esters with fatty acids; bactericide combinations in detergents)  
 IT 65-85-0, Benzoic acid, uses  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (r; bactericide combinations in detergents)  
 IT 67-68-5, uses 70-55-3 98-11-3D,  
 Benzenesulfonic acid, mono-C10-14-alkyl derivs., compds. with Me  
 1H-benzimidazol-2-ylcarbamate, uses 127-65-1 577-11-7  
 1085-98-9 2032-65-7 3383-96-8  
 5329-14-6, Sulfamic acid 7287-19-6 27176-87-0  
 120068-37-3 128275-31-0  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (bactericide combinations in detergents)  
 RN 67-68-5 HCAPLUS  
 CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



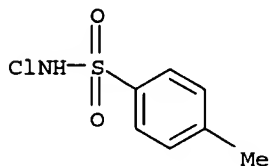
RN 70-55-3 HCAPLUS  
 CN Benzenesulfonamide, 4-methyl- (9CI) (CA INDEX NAME)



RN 98-11-3 HCAPLUS  
 CN Benzenesulfonic acid (8CI, 9CI) (CA INDEX NAME)

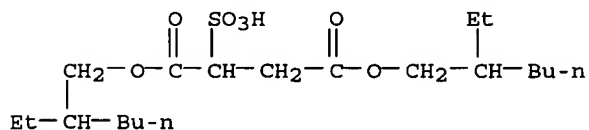


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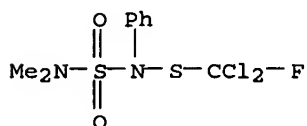
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RN 577-11-7 HCAPLUS  
 CN Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt (9CI)  
 (CA INDEX NAME)



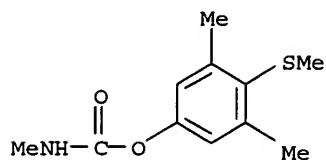
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RN 1085-98-9 HCAPLUS  
 CN Methanesulfenamide, 1,1-dichloro-N-[(dimethylamino)sulfonyl]-1-fluoro-N-phenyl- (9CI) (CA INDEX NAME)

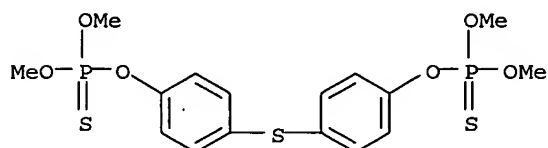




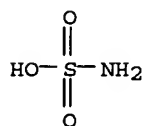
RN 2032-65-7 HCAPLUS  
 CN Phenol, 3,5-dimethyl-4-(methylthio)-, methylcarbamate (9CI) (CA INDEX NAME)



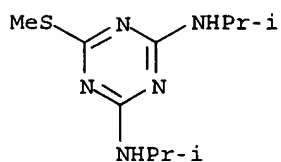
RN 3383-96-8 HCAPLUS  
 CN Phosphorothioic acid, O,O'-(thiodi-4,1-phenylene) O,O,O',O'-tetramethyl ester (9CI) (CA INDEX NAME)



RN 5329-14-6 HCAPLUS  
 CN Sulfamic acid (8CI, 9CI) (CA INDEX NAME)



RN 7287-19-6 HCAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N,N'-bis(1-methylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 27176-87-0 HCAPLUS  
 CN Benzenesulfonic acid, dodecyl- (8CI, 9CI) (CA INDEX NAME)

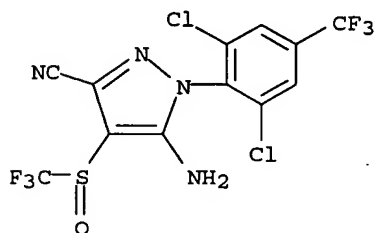


D1-SO<sub>3</sub>H

Me-(CH<sub>2</sub>)<sub>11</sub>-D1

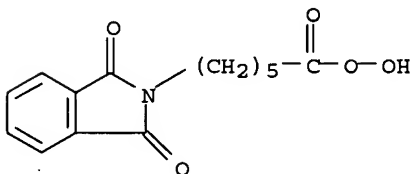
RN 120068-37-3 HCAPLUS

CN 1H-Pyrazole-3-carbonitrile, 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 128275-31-0 HCAPLUS

CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)



L25 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:305816 HCAPLUS

DN 130:356268

ED Entered STN: 19 May 1999

TI A fast, mild and complete destruction of chemical pollutants is a significant criterion in chemical decontamination

AU Lion, Claude; Da Conceicao, Louis; Sayag, Hugo

CS Institut de topologie et de dynamique des systemes de l'universite Paris-7 Denis-Diderot, associe au CNRS, UPRESA 7086, Paris, 75005, Fr.

SO Comptes Rendus de l'Academie des Sciences, Serie IIc: Chimie (1999), 2(1), 57-62

CODEN: CASCEN; ISSN: 1387-1609

PB Editions Scientifiques et Medicales Elsevier

DT Journal

LA French

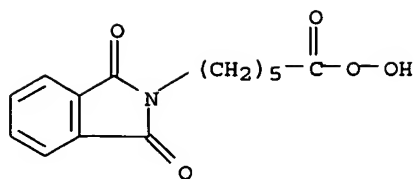
CC 59-4 (Air Pollution and Industrial Hygiene)

Section cross-reference(s): 5, 60

AB The chemical decontamination of toxic organophosphorus (pesticides or warfare agents) and sulfur compds. is of increasing importance. These products are destroyed by nucleophilic substitution for organophosphorus and oxidation

of sulfur compds. Peroxy acids, in micellar medium, are interesting for their reactivity on both families. We show here the interest of a new family: the phthalimidoperoxy acids.

- ST pesticide decompn phthalimidoperoxy acid; chem warfare agent decompn phthalimidoperoxy acid
- IT Chemical warfare agents  
Pesticides  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT Peroxy acids  
RL: NUU (Other use, unclassified); USES (Uses)  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT Carboxylic acids, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(imidoperoxy; fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT Organic compounds, processes  
RL: REM (Removal or disposal); PROC (Process)  
(phosphorus-containing; fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT 5797-07-9P, Phthalimidoperacetic acid 5880-39-7P 124931-51-7P  
128275-31-0P, Phthalimidoperhexanoic acid  
224645-20-9P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT 112-02-7, Cetyl trimethyl ammonium chloride  
RL: NUU (Other use, unclassified); USES (Uses)  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT 64-17-5, Ethanol, reactions 1074-82-4, Potassium phthalimide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- IT 139-66-2, Diphenyl sulfide 311-45-5, p-Nitrophenyl diethyl phosphate 505-60-2, Yperite 544-40-1, Dibutyl sulfide 7704-34-9D, Sulfur, compds., processes 99188-19-9  
RL: REM (Removal or disposal); PROC (Process)  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Cristau, H; Sulfur and Silicon 1996, V111, P129
  - (2) Delmas, G; FR 2676368 1991 HCAPLUS
  - (3) Delmas, G; FR 9603204 1996
  - (4) Feldhues, M; Tetrahedron 1985, V41, P4195 HCAPLUS
  - (5) Gethoffer, H; US 5061807 1991 HCAPLUS
  - (6) Gonzaga, F; C R Acad Sci Paris serie IIc 1998, V1, P209 HCAPLUS
  - (7) Hedavatullah, M; Bull Soc Chim Belg 1993, V102, P281
  - (8) Hedayatullah, M; Sulfur and Silicon 1994, V89, P1 HCAPLUS
  - (9) Julia, S; J Chem Soc Chem Commun 1978, P742 HCAPLUS
  - (10) Lion, C; Bull Soc Chim Belg 1990, V99, P127 HCAPLUS
  - (11) Lion, C; Bull Soc Chim Belg 1991, V100, P555 HCAPLUS
  - (12) Lion, C; Bull Soc Chim Belg 1992, V101, P249 HCAPLUS
  - (13) Lion, C; Bull Soc Chim Belg 1994, V103, P115 HCAPLUS
  - (14) Lion, C; Bull Soc Chim Belg 1997, V106, P221 HCAPLUS
  - (15) Ogata, Y; J Chem Soc Perkin Trans II 1973, P755 HCAPLUS
- IT 128275-31-0P, Phthalimidoperhexanoic acid  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(fast, mild and complete destruction of pesticides and chemical warfare agents using phthalimidoperoxy acids)
- RN 128275-31-0 HCAPLUS
- CN 2H-Isoindole-2-hexaneperoxoic acid, 1,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)



IT 139-66-2, Diphenyl sulfide 544-40-1, Dibutyl sulfide  
RL: REM (Removal or disposal); PROC (Process)  
(fast, mild and complete destruction of pesticides and chemical warfare  
agents using phthalimidoperoxy acids)  
RN 139-66-2 HCAPLUS  
CN Benzene, 1,1'-thiobis- (9CI) (CA INDEX NAME)

Ph-S-Ph

RN 544-40-1 HCAPLUS  
CN Butane, 1,1'-thiobis- (9CI) (CA INDEX NAME)

n-Bu-S-Bu-n

=> b home  
FILE 'HOME' ENTERED AT 15:58:04 ON 15 JUN 2005

=>

=> d his full

(FILE 'HOME' ENTERED AT 07:45:39 ON 16 JUN 2005)

FILE 'HCAPLUS' ENTERED AT 07:45:57 ON 16 JUN 2005

ACT NWAC2608/Q

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L1      QUE ABB=ON  PLU=ON  C14H15NO5 AND NC4-C6/ES
L2      QUE ABB=ON  PLU=ON  (PMS OR MAN OR IDS)/CI OR UNSPECIFIED OR
      COMPD OR COMPOUND OR (D OR T)/ELS
L3      QUE ABB=ON  PLU=ON  L1 NOT L2
L4      QUE ABB=ON  PLU=ON  L3 AND NR=2
L5      QUE ABB=ON  PLU=ON  128275-31-0/BI AND L4
L6      QUE ABB=ON  PLU=ON  L5 OR ((6 OR E) (1A) (PHTHALIMIDOPE
      ROXY OR PHTHAL? (1A) (IMIDOPEROX? OR IMID? (1A) PEROX?) (1A)
      HEXANOIC) OR PHTHALIMIDOPERHEXANOIC OR PHTHAL? (1A) (PERHEXAN?
      OR PER? (1A) HEXAN?) OR PHTHALIMID? (1A) PERHEXAN?) (1A) ACID#

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FILE 'WPIX' ENTERED AT 07:46:16 ON 16 JUN 2005

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L7      21 SEA ABB=ON  PLU=ON  (((6 OR EPSILON) (1A) (PHTHALIMIDOPEROXY
      OR PHTHAL? (1A) (IMIDOPEROX? OR IMID? (1A) PEROX?) (1A) HEXANOIC)
      OR PHTHALIMIDOPERHEXANOIC OR PHTHAL? (1A) (PERHEXAN? OR
      PER? (1A) HEXAN?) OR PHTHALIMID? (1A) PERHEXAN?) (1A) ACID#)/BIX
      E PHTHAL/DRN
      E PHTHAL/DCN
      E PHTHAL/CN
L8      4 SEA ABB=ON  PLU=ON  ("PHTHALIMIDOPEROXYHEXANOIC ACID"/CN OR
      PHTHALIMIDOPEROXYHEXANOIC-ACID/CN OR "PHTHALIMIDOPEROXYOCTANOIC
      ACID"/CN OR PHTHALIMIDOPEROXYOCTANOIC-ACID/CN)
      E PHTHALIMIDOPEROXYHEXANOIC ACID/DRN
      E PHTHALIMIDOPEROXYHEXANOIC ACID/DCN
L9      227 SEA ABB=ON  PLU=ON  (C07D401-12 AND C07C409)/IPC OR (E10-A04B1C
      AND (B06-D03 OR C06-D03 OR E06-D03))/MC OR (D611 (S) J171(S) K9
      10)/M0,M1,M2,M3,M4,M5,M6
L10     23094 SEA ABB=ON  PLU=ON  N050/M0,M1,M2,M3,M4,M5,M6 OR "E11-E"/MC OR
      C07B033/IPC
L11     144779 SEA ABB=ON  PLU=ON  (E10-H01 OR E10-H01A OR E10-H01B OR
      B10-H01 OR C10-H01)/MC OR H59?/M0,M1,M2,M3,M4,M5,M6 OR
      C07C043/IPC
L12     49199 SEA ABB=ON  PLU=ON  C07C315-02/IPC OR (B10-A10 OR C10-A10 OR
      E10-A10?)/MC OR (K422 OR K433 OR K441)/M0,M1,M2,M3,M4,M5,M6
L13     102510 SEA ABB=ON  PLU=ON  C07C315-02/IPC OR (K431 OR K421)/M0,M1,M2,M
      3,M4,M5,M6
L14     50377 SEA ABB=ON  PLU=ON  C07C317/IPC OR (B10-A10 OR C10-A10 OR
      E10-A10?)/MC OR (K422 OR K433 OR K441)/M0,M1,M2,M3,M4,M5,M6
L15     22242 SEA ABB=ON  PLU=ON  L11 AND L12
L16     16242 SEA ABB=ON  PLU=ON  L14 AND L13
L17     143 SEA ABB=ON  PLU=ON  (L15 OR L16) AND L10
      E ALLEGRIINI P/AU
L18     26 SEA ABB=ON  PLU=ON  "ALLEGRIINI P"/AU
      E NAPOLETANO L/AU
      E RAZZETTI G/AU
L19     6 SEA ABB=ON  PLU=ON  "RAZZETTI G"/AU
      E NAPOLETANO C/AU
L20     4 SEA ABB=ON  PLU=ON  "NAPOLETANO C"/AU
L21     21 SEA ABB=ON  PLU=ON  DINAMIT?/CS,PA
L22     0 SEA ABB=ON  PLU=ON  L17 AND (L18 OR L19 OR L20 OR L21)
L23     3 SEA ABB=ON  PLU=ON  (L15 OR L16) AND (L18 OR L19 OR L20 OR
      L21)
L24     0 SEA ABB=ON  PLU=ON  L17 AND (L7 OR L8 OR L9)
L25     31352 SEA ABB=ON  PLU=ON  (L15 OR L16) NOT L23
L26     83 SEA ABB=ON  PLU=ON  L25 AND (L7 OR L8 OR L9)
L27     2 SEA ABB=ON  PLU=ON  L25 AND (L7 OR L8)
L28     1 SEA ABB=ON  PLU=ON  L23 AND (L7 OR L8 OR L9)
L29     3 SEA ABB=ON  PLU=ON  L23 OR L28

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Search done by Noble Jarrell

L30 81 SEA ABB=ON PLU=ON L26 NOT L27  
 L31 45 SEA ABB=ON PLU=ON L30 NOT (PY>2003 OR AY>2003 OR PRY>2003)

=> b wpix

FILE 'WPIX' ENTERED AT 09:05:36 ON 16 JUN 2005 .  
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FILE LAST UPDATED: 13 JUN 2005 <20050613/UP>  
 MOST RECENT DERWENT UPDATE: 200537 <200537/DW>  
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 PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-revision/>  
 FOR DETAILS. <<<

=> d all 129 tot

L29 ANSWER 1 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2004-698791 [68] WPIX

DNC C2004-247137

TI Oxidizing thioethers to sulfoxides/sulfones (or sulfoxides to sulfones),  
 used to prepare biologically active compound containing sulfinyl/sulfonyl  
 group, comprises oxidizing thioethers/sulfoxides with epsilon-  
 phthalimidoperhexanoic acid.

DC B05 C03

IN ALLEGRI, P; CASTALDI, G; NAPOLETANO, C;  
 RAZZETTI, G

PA (ABBR-N) ABBREVIATED DIPHARMA SPA; (DINA-N) DINAMITE DIPHARMA SPA  
 ; (DIPH-N) DIPHARMA SPA

CYC 34

PI US 2004192929 A1 20040930 (200468)\* 5 C07C317-02 <--  
 EP 1466897 A1 20041013 (200468) EN C07C315-02 <--  
 R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV  
 MC MK NL PL PT RO SE SI SK TR

CA 2461833 A1 20040928 (200470) EN C07C317-44 <--

ADT US 2004192929 A1 US 2004-801608 20040317; EP 1466897 A1 EP 2004-5420  
 20040308; CA 2461833 A1 CA 2004-2461833 20040325

PRAI IT 2003-MI617 20030328

IC ICM C07C315-02; C07C317-02; C07C317-44  
 ICS C07C317-14; C07D401-12

AB US2004192929 A UPAB: 20041026

NOVELTY - Oxidation of thioethers to sulfoxides or sulfones; or oxidation  
 of sulfoxides to sulfones comprises treatment of thioethers or sulfoxides  
 with an oxidizing amount of epsilon-phthalimidoperhexanoic  
 acid.

USE - The process is useful for the preparation of biologically  
 active compounds containing a sulfinyl or sulfonyl group (particularly  
 modafinil, modafinil-sulfone, sulindac, sulindac-sulfone, dapsone,  
 omeprazole, pantoprazole, lansoprazole, timoprazole, picoprazole,

rabeprazole or exomeprazole) (claimed). The sulfinyl- or sulfonyl-organic compounds are useful as biologically active compounds or as intermediates in their preparation. The epsilon -phthalimidoperhexanoic acid is useful in the preparation of cosmetic formulations and detergents for domestic or industrial use. The process is useful in the preparation of compounds of industrial interest, in particular pharmaceuticals for human or veterinary use.

ADVANTAGE - The epsilon -phthalimidoperhexanoic acid can be easily and safely handled and used on an industrial scale without the need of particular plants or specific safety procedures. The epsilon -phthalimidoperhexanoic acid is also a stable, commercially available, solid and cheap product; and particularly epsilon -phthalimidoperhexanoic acid and its reduced by-product (epsilon -phthalimidohexanoic acid) are substantially low polluting and can be advantageously used on a large scale.

Dwg.0/0

FS

CPI

FA AB; DCN

MC CPI: B06-D05; B10-A10; C06-D05; C10-A10

L29 ANSWER 2 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2004-561853 [54] WPIX

DNC C2004-205362

TI Preparation of benzo(d)isoxazol-3-yl-methanesulfonic acid useful in the synthesis of zonisamide involves reacting 2,2-dioxo-2,3-dihydro-benzo(e)(1,2)oxathiin-4-one oxime with a basic agent.

DC B02

IN ALLEGRI, P; BOLOGNA, A; CASTALDI, G; LUCCHINI, V; MANTEGAZZA, S; RAZZETTI, G

PA (DINA-N) DINAMITE DIPARMA SPA

CYC 107

PI WO 2004063173 A1 20040729 (200454)\* EN 22 C07D261-20

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE

LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE

DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG

KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM

PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US

UZ VC VN YU ZA ZM ZW

AU 2003298248 A1 20040810 (200479) C07D261-20

ADT WO 2004063173 A1 WO 2003-EP14919 20031224; AU 2003298248 A1 AU 2003-298248 20031224

FDT AU 2003298248 A1 Based on WO 2004063173

PRAI IT 2003-MI1383 20030704; IT 2003-MI26 20030110

IC ICM C07D261-20

ICS C07D327-06

AB WO2004063173 A UPAB: 20040823

NOVELTY - Preparation of benzo(d)isoxazol-3-yl-methanesulfonic acid (I) or its salt involves reacting 2,2-dioxo-2,3-dihydro-benzo(e)(1,2)oxathiin-4-one oxime (III) with a basic agent.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) lithium salt of (I) or a salt of (I) with an organic base (e.g. secondary or tert-amine);

(2) crystalline form of (III) and its preparation; and

(3) preparation of zonisamide.

ACTIVITY - Anticonvulsant; CNS-Gen.

MECHANISM OF ACTION - None given.

USE - In the preparation of benzo(d)isoxazol-3-yl-methanesulfonic acid or its salts useful intermediate in the synthesis of zonisamide (claimed), a known medicament having antiepileptic, anticonvulsive and antineurotoxic activities.

ADVANTAGE - The process allows to prepare benzo(d)isoxazol-3-yl-methanesulfonic acid with less environmental impact, in purer form and higher yield than with the method reported in the prior art. Zonisamide is prepared in highly pure form and good yield, suitable for the preparation

on an industrial scale.

Dwg.0/0

FS CPI

FA AB; GI; DCN

MC CPI: B06-C; B06-E01; B14-J01; B14-J07

L29 ANSWER 3 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2004-042427 [04] WPIX

DNC C2004-017356

TI Preparation of 2-((diphenylmethyl)sulfinyl)acetamide, useful for treating idiopathic narcolepsy, involves oxidation of sodium-2-((diphenylmethyl)sulfinyl)acetate to the corresponding sulfoxide and the derivatization.

DC B05

IN CASTALDI, G; LUCCHINI, V; TARQUINI, A

PA (DINA-N) DINAMITE DIPHARMA SPA; (DIPH-N) DIPHARMA SPA

CYC 104

PI WO 2003095423 A1 20031120 (200404)\* EN 8 C07C315-02 <--  
 RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS  
 LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL  
 PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU  
 ZA ZM ZW

AU 2003227668 A1 20031111 (200442) C07C315-02 <--

EP 1503983 A1 20050209 (200512) EN C07C315-02 <--

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV  
 MC MK NL PT RO SE SI SK TR

KR 2004108789 A 20041224 (200528) C07C315-02 <--

ADT WO 2003095423 A1 WO 2003-EP4229 20030423; AU 2003227668 A1 AU 2003-227668  
 20030423; EP 1503983 A1 EP 2003-725083 20030423, WO 2003-EP4229 20030423;  
 KR 2004108789 A KR 2004-718040 20041109

FDT AU 2003227668 A1 Based on WO 2003095423; EP 1503983 A1 Based on WO  
 2003095423

PRAI IT 2002-MI991 20020510

IC ICM C07C315-02

ICS C07C315-04; C07C317-44

AB WO2003095423 A UPAB: 20040115

NOVELTY - Preparation of 2-((diphenylmethyl)sulfinyl)acetamide (I) involves oxidation of sodium-2-((diphenylmethyl)sulfinyl)acetate with sodium hypochlorite to give sodium-2-((diphenylmethyl)sulfinyl)acetate (II); hydrolysis of (II) to give 2-((diphenylmethyl)sulfinyl)acetic acid (III); and conversion of (III) to (I) by treatment with condensing agent and ammonia.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for sodium-2-((diphenylmethyl)sulfinyl)acetate as new.

ACTIVITY - CNS Gen.

MECHANISM OF ACTION - alpha 1-Adrenergic agonist.

USE - For preparation of 2-((diphenylmethyl)sulfinyl)acetamide (claimed), useful for the treatment of idiopathic narcolepsy.

ADVANTAGE - The process prevents sulfone formation and directly forms (I) with high purity. The process does involve use of dimethyl sulfate, which is carcinogenic reagent.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B10-A10; B14-J01A2; B14-J01A4; B14-J02C1

=> d all abeq tech 127 tot

L27 ANSWER 1 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2005-033171 [04] WPIX

DNC C2005-010958

TI Production of organic compounds with functional oxidized groups, e.g.



epoxide compounds for use as monomers, involves reacting an oxidizable precursor, e.g. an olefin, with an imidoaromatic percarboxylic acid.

DC A41 D21 D25 E13

IN BUYLE, O; LORENT, K; MATHIEU, V

PA (SOLV) SOLVAY BELGE SA; (SOLV) SOLVAY & CIE

CYC 108

PI FR 2855824 A1 20041210 (200504)\* 14 C07D303-14

WO 2004106313 A1 20041209 (200504) FR C07D301-14

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE

LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE

DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG

KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ

OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG

US UZ VC VN YU ZA ZM ZW

ADT FR 2855824 A1 FR 2003-6718 20030603; WO 2004106313 A1 WO 2004-EP50990  
20040602

PRAI FR 2003-6718 20030603

IC ICM C07D301-14; C07D303-14

ICS C07C317-04; C07D303-04; C07D303-08; C07D305-06; C07D307-33;

C07D309-30; C07D313-04

AB FR 2855824 A UPAB: 20050117

NOVELTY - A method for the production of organic compounds with functional oxidized groups involves reacting a precursor containing an oxidizable function (I) with an imidoaromatic percarboxylic acid (II).

USE - Compounds obtained by this method are used, e.g. as monomers, ingredients of cosmetic compositions and surfactants.

ADVANTAGE - Enables the production of organic compounds with functional oxidized groups without the disadvantages of prior-art methods using peracetic acid as oxidizing agent, e.g. possible hydrolysis of sensitive substrates and unsatisfactory yield and/or selectivity.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A01-E07; D08-B; D08-B13; E05-K; E06-A02D; E07-A03A; E10-A02; E10-A03;  
E10-A04B; E10-A09A; E10-A09B; E10-A09C; E10-A10; E10-A18A;  
E10-C02; E10-C03; E10-C04; E10-E02P; E10-E04

TECH UPTX: 20050117

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Method: Reaction for 10 minutes to 50 hours at -100 to +150 degrees C and 0.5-100 bar in a reaction mixture containing 0.1-90 wt.% (II), substantially in the absence of water and preferably with progressive or continuous addition of (II) (as the pure substance or in organic solvent).

Preferred Precursors: Optionally substituted cyclic or acyclic olefins or ketones, compounds with at least one oxidizable sulfur, selenium, nitrogen or phosphorus atom, or oxidizable fluoro compounds.

Preferred Peracid: epsilon-Phthalimido-perhexanoic acid.

L27 ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-136570 [14] WPIX

DNC C2001-039979

TI Whitening teeth using peroxyamidophthalimides, sulfoperbenzoic acid, monoperoxyphthalic acid or (per)acetylatedperboric acid with isoquinolinium as catalysts.

DC B02 D21 E13

IN JOINER, A; THORNTWHAITE, D W

PA (CHEO) CHESEBROUGH PONDS USA CO DIV CONOPCO INC

CYC 1

PI US 6165448 A 20001226 (200114)\* 5 A61K007-16

ADT US 6165448 A US 1999-401879 19990923

PRAI EP 1998-307835 19980925

IC ICM A61K007-16

ICS A61K007-20

AB US 6165448 A UPAB: 20010312

NOVELTY - Method for whitening teeth comprises applying an oral care

composition containing peroxyamidophthalimides, sulfoperbenzoic acid, monoperoxyphthalic acid or (per)acetylatedperboric acid with isoquinolinium salts as catalysts.

DETAILED DESCRIPTION - A method for whitening teeth comprises applying an oral composition comprising (1) organic peroxy compound selected from: (a) peroxy amido phthalimides of formula (I); (b) sulfoperbenzoic acid; (c) monoperoxyphthalic acid; and (d) (per)acetylperoxyboric acid or salts of (a) to (d); and (2) an imine quaternary salt of formula (II) and brushing the teeth with the composition.

R = H or 1-4C alkyl;

n = 1-5;

X = CO or SO<sub>2</sub>;

R1 = H or 1-8C alkyl;

R2 = H, phenyl or keto group;

R3-R5 = H or OR8;

R8 = 1-4C alkyl;

R6, R7 = H or 1-4C alkyl;

X = counterion stable in the presence of oxidizing agent.

USE - The composition is useful for whitening teeth.

ADVANTAGE - The composition provides improved whitening of teeth. The catalysts react with the peroxy compounds to provide more reactive oxygen species.

Dwg.0/0

FS CPI

FA AB; GI; DCN

MC CPI: B06-D03; B06-F01; B10-A04; B14-N06; D08-B08; E05-C02; E06-D03;  
E06-F01; E10-A04B

TECH UPTX: 20010312

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Method: The peroxy compound is N-phthalimido hexanoic peroxy acid (PAP) or sulfoperbenzoic acid potassium salt (KSPB). The imine quaternary salt is a compound in which R1 is Me and R2 to R6 are H and X is tosylate. The composition also comprises a fluoride compound and has a pH of 7-8.5.

=> b home

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